

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298 **FILED** 07/03/20 11:16 AM

July 3, 2020

Agenda ID #18595 Ratesetting

TO PARTIES OF RECORD IN APPLICATION 18-12-001:

This is the proposed decision of Administrative Law Judge Manisha Lakhanpal. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's August 6, 2020 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

The Commission may hold a Ratesetting Deliberative Meeting to consider this item in closed session in advance of the Business Meeting at which the item will be heard. In such event, notice of the Ratesetting Deliberative Meeting will appear in the Daily Calendar, which is posted on the Commission's website. If a Ratesetting Deliberative Meeting is scheduled, *ex parte* communications are prohibited pursuant to Rule 8.2(c)(4)(B).

/s/ ANNE E. SIMON

Anne E. Simon Chief Administrative Law Judge

AES:gp2 Attachment

Decision PROPOSED DECISION OF ALJ LAKHANPAL (Mailed on 7/3/2020)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Liberty Utilities (CalPeco Electric) LLC (U 933-E) for Authority to Among Other Things, Increase Its Authorized Revenues for Electric Service, Update Its Energy Cost Adjustment Clause Billing Factors, Establish Marginal Costs, Allocate Revenues, And Design Rates, as of January 1, 2019.

Application 18-12-001

DECISION ON THE TEST YEAR 2019 GENERAL RATE CASE FOR LIBERTY UTILITIES (CALPECO ELECTRIC) LLC

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Appendix A – Liberty Utilities (CalPeco Electric) LLC Summary of Results of Operations

Appendix B - Revised Rates

DECISION ON THE TEST YEAR 2019 GENERAL RATE CASE OF LIBERTY UTILITIES (CALPECO ELECTRIC) LLC

Summary

This decision approves a revenue requirement of \$85,402,000 for Liberty Utilities (CalPeco) (Liberty) pursuant to its 2019 General Rate Case Application 18-12-001. The adopted amount is \$6,038,000 or 6.60 percent lower than Liberty's request of \$91,440,000. The adopted revenue requirement shall become effective January 1, 2019 upon adoption of this decision and shall be implemented upon filing of tariffs pursuant to the directives of this decision.

This decision also authorizes Liberty to continue its use of a post-test year adjustment mechanism. The adjustment mechanism provides funds necessary for Liberty to continue to provide safe and reliable service to customers beyond the test year, while providing Liberty a reasonable opportunity to earn the rate of return authorized by this decision. The post-test year adjustment mechanism is substantially unchanged from a previously adopted mechanism. To mitigate barriers in investment opportunities, this decision reviews all proposed capital projects and grants an exception for safety and reliability projects proposed for construction in the post-test years 2020 and 2021. Based on actual cost data and in-service dates Liberty will be able to invest and recover costs of the approved projects via the post-test year adjustment mechanism.

The Decision requires Liberty to stop relying on the marginal cost of service study results of NV Energy and instead undertake its own distribution level marginal cost of service study for the next General Rate Case Application.

The Decision also authorizes the following:

• Energy Cost Adjustment Clause Billing Factor of \$30.42 per megawatt-hour.

- A Vegetation Management program budget of \$3.98 million with a cost cap of \$3.06 million to be included in rates each year and the balance amount of \$915,705 to be tracked in a one-way memorandum account and recovered via a Tier 2 Advice Letter.
- \$0.47 million per year for Energy Efficiency Programs.
- \$0.42 million per year for the Solar Incentive Program.
- An authorized Return on Equity of 10 percent resulting in an Overall Rate of Return of 7.63 percent
- A debt/equity structure of 47.5 percent/52.5 percent
- Authority to transfer the amount in the General Rate Case Memorandum Account to the Base Revenue Requirement Balancing Account and amortize it over an eighteen month period consistent with the tariff provisions.

The authorized amounts are less than Liberty requested. The lower approved amounts result in \$1.14 million or a 1.43 percent higher Base Rate Revenue compared to present rates. When combined with all the other charges that Liberty is authorized to collect, the rate revenues will increase by 3.1 percent relative to present rates. The Decision retains the current rate design and customer charge for all rate classes.

Appendix A to this decision contains the detailed results of operations tables that summarize the annual General Rate Case revenue requirements approved in this decision, based on our decisions regarding the forecasted costs we find to be reasonable, and which are adopted in today's decision.

The proceeding is closed.

1. Procedural Background

On December 3, 2018, Liberty Utilities (CalPeco) (Liberty) filed a General Rate Case (GRC) for the test year (TY) 2019 and two subsequent years (2020 and 2021).

Protests were timely filed on December 26, 2018, and January 3, 2019, by the Public Advocates Office (Cal Advocates) and the A-3 Customer Coalition (A-3 CC), respectively. On December 21, 2018, Liberty filed a Motion to Track Costs in its GRC Memorandum Account. On January 7, 2019, A-3 CC filed a response to the Motion, and on January 17, 2019, Liberty filed a reply to the response.

A Prehearing Conference (PHC) was held on January 25, 2019 and Assigned Commissioner Martha Guzman Aceves issued a Scoping Memorandum and Ruling on March 6, 2019.

On May 16, 2019, the Commission issued Decision (D.) 19-05-007 authorizing Liberty to use the GRC memorandum account to track the difference in revenue requirement in effect on December 31, 2018 and the final revenue requirement that the California Public Utilities Commission (CPUC) will authorize to become effective for Liberty's Test Year 2019 GRC in this proceeding.

Public Participation Hearings were held on July 24, 2019 through July 26, 2019.

On July 23, 2019, Cal Advocates served its testimony and Reports on the Results of Operations. On August 5, 2019, A-3 CC served its testimony. On August 23, 2019, Liberty served its Rebuttal Testimony.

On August 7, 2019, the Commission reassigned this proceeding to Administrative Law Judge (ALJ) Lakhanpal.

During September 2019, the Parties engaged in settlement discussions that were not successful. On September 30, 2019, Cal Advocates and A-3 CC filed Motions to Strike Portions of Liberty's Rebuttal Testimony. On October 3, 2019, an ALJ Ruling Modifying Proceeding Schedule and Seeking Status Update on

Settlement Conference was issued. On October 8, 2019, the Parties filed a Joint Status Update Regarding Settlement Conference.

On October 15, 2019, Liberty filed a Response to Cal Advocates and A-3 CC's Motions to Strike. On November 4, 2019, the assigned ALJ issued a Ruling Denying the Motion to Strike Rebuttal Testimony and Granting Procedural Opportunity to File Surrebuttal Testimony. On November 4, 2019, ALJ Lakhanpal also issued a Ruling Seeking Additional Information on Residential Rate Design and Capital Project Planning and a Ruling Adopting Confidential Modeling Procedures.

On November 19, 2019, Liberty served Supplemental Testimony in Response to the ALJ Ruling Seeking Additional Information on Residential Rate Design and Capital Project Planning. On November 22, 2019, A-3 served Surrebuttal Testimony. On December 2, 2019, Liberty served Surreply Testimony.

Evidentiary Hearings (EHs) were held from December 9-11, 2019. Briefs were filed on January 17, 2020, and reply briefs were filed on February 3, 2020.

2. Background of the Application

2.1. Relief Requested

Liberty's GRC application seeks authorization to revise its current revenue requirement to recover its projected costs of providing electricity to its customers. Liberty has proposed three test years and requests that the Commission adopt revenue requirements for 2019, 2020, and 2021. In summary, Liberty is requesting:

- 2019 Revenue Requirement of \$91.44 million, which is an increase of \$6.718 million or 8.8 percent, effective January 1, 2019.
- 2020 Revenue Requirement of \$96.93 million, which is an increase of \$5.859 million or 6.0 percent, effective January 1, 2020.

• 2021 Revenue Requirement of \$100.98 million, an increase of \$3.823 million or 6.3 percent, effective January 1, 2021.

2.2. Public Participation Hearings and Correspondence

On July 24, 25, and 26, 2019, ALJ Fogel presided over Public Participation Hearings (PPHs) held in Kings Beach, South Lake Tahoe, and Truckee. The purpose of organizing these PPHs was to receive comments from Liberty's customers regarding the impact of the GRC application on them. Many of the comments at the PPHs opposed the proposed increases that Liberty is requesting. Some members of the public opposed a rate increase, which they attribute to additional load and infrastructure costs due to secondary homeowners. Others at the PPHs pointed out that several of Liberty's customers are on fixed incomes and cannot afford any increase in their utility bills. Liberty's representatives noted that secondary homeowners pay slightly higher rates than primary homeowners.

3. Discussion

Analysis Approach

This Decision follows the outline in the Applicant's opening brief. We focused our attention on the significant points of contention and did not try to summarize every nuance of the parties' positions in this Decision. We have exhaustively reviewed the exhibits in this proceeding, the arguments made by the parties in their briefs, and considered all the evidence and issues that parties have raised in deciding what costs should be adopted.

3.1. Post Test Year Adjustment Mechanism (PTAM)

This Decision authorizes the continuing use of the PTAM.

The Applicant is seeking approval of their revenue requirement for three test years (2019-2021) that will recover their spending on capital projects and

operations and maintenance ("O&M") during these years.¹ Liberty does not rely on a PTAM to increase its revenue requirement for the years 2020 and 2021. Liberty states that the incremental revenue requirement expected for 2020 and 2021 is based on its capital investment forecast and not attrition or post-test years adjustment. ² Liberty argues that implementing PTAM would eliminate practically or all of the 2020 and 2021 capital projects from consideration because they would not qualify for PTAM for various reasons, including not meeting the \$4 million threshold or not being able to commence the project because the construction permits are contingent on Commission approval of the project.³

Liberty is requesting a 2019 Revenue Requirement of \$91.44 million, a 2020 Revenue Requirement of \$96.93 million, and a 2021 Revenue Requirement of \$100.98 million.⁴

Cal Advocates argues Liberty currently relies on a PTAM and recommends the Commission require Liberty continue using its current PTAM as outlined in its tariffs and as approved in Commission Decision (D.)12-11-030, Liberty's 2013 general rate case.⁵ It states PTAM would allow Liberty to continue adjusting rates in 2020 and 2021 based on the Consumer Price Index less a 0.5 percent productivity factor for both labor and non-labor components.⁶ Cal Advocates further states that Liberty's PTAM contains provisions to raise

¹ Liberty-01, at 1, line 10-12.

² Liberty-01, at 2, line 1-8.

³ Liberty-10, at 2, line 12-16.

⁴ Liberty-06, at 2, Table I-1.

⁵ Cal Advocates-01, at 4, line 16-17.

⁶ Cal Advocates-01, at 4, line 18-20.

rates in attrition years for projects both under and over \$4 million.⁷ Cal Advocates states Liberty had used the attrition mechanism to raise rates in years when it did not have any capital projects above the \$4 million cap.⁸

We agree with Cal Advocates and find PTAM as a stable mechanism to allow incremental rate increases in the post-test years. We see PTAM as an efficient means for setting fair and reasonable rates and authorize its continuing use. The Commission will retain the "Attrition Rate Factor," as outlined in Section 9 of the Preliminary Statement in Liberty's tariff and the Major Plant Addition Category.

While we retain the PTAM, we also want to address Liberty's concern about the risk of denial of cost recovery in post-test years, which may discourage it from pursuing critical capital infrastructure projects in 2020-2021. Liberty states that PTAM is a recovery mechanism for only AFTER a project completion, while the GRC utilizes a test year approach approving cost recovery and project plans before implementation. To mitigate barriers in investment opportunities, we will review the proposed 2020 and 2021 capital projects, and grant approval for projects that we find critical for safety and reliability. These projects will be eligible for cost recovery via PTAM. By approving 2020 and 2021 capital projects, like the Luning Solar Project, we enable Liberty to seek cost recovery through its PTAM.

The PTAM will be authorized for use in 2020 and 2021. The PTAM/ escalation factor will be calculated as the greater of: (i) the September Global

⁷ See Cal Advocates Opening Brief, at 7.

⁸ Cal Advocates Opening Brief, at 5.

⁹ Exhibit Liberty-10, Footnote 4, at 2.

 $^{^{10}\ \ \}textit{See}\ D.16\text{-}01\text{-}021$ ("Luning Approval Decision").

Insight U.S. Economic Outlook forecast of Consumer Price Index for the following calendar year with an offsetting productivity factor of 0.5 percent; or (ii) zero. The Applicant may file the PTAM factor on October 15, 2020 (or as soon after that as is reasonable) as a Tier 2 Advice Letter, with rates effective January 1, 2021. Given the effective date of this Decision, it is not feasible to file a PTAM factor based on the Consumer Price Index attrition factor for 2020.

Liberty may use the PTAM for Major Capital Additions for 2020 and 2021 based on actual cost data and in-service dates. A PTAM for Major Capital Additions may be filed for 2020 as soon as reasonably feasible following the effective date of this Decision. A PTAM for Major Capital Additions for 2021 may be submitted consistent with the schedule stated above.

3.2. Capital Projects

Liberty is requesting approval of \$117 million for capital expenditures from 2019 to 2021.¹¹

Cal Advocates reviewed 2019 capital expenditures but not 2020 and 2021 capital expenses. Liberty states that Cal Advocates' review of Liberty's capital cost forecast focuses solely on 2019, and as such, Liberty's requests for 2020 and 2021 are unopposed.¹²

Liberty presents its forecast for capital projects in these categories (1) Safety & Reliability, (2) Customer Driven, (3) Grid Automation and Reliability, and (4) Others.

3.2.1. Safety and Reliability Projects

Liberty's Safety and Reliability Projects¹³

¹¹ Liberty-01, at 5, line 7-8.

¹² Liberty-10, at 6, line 12-15.

¹³ Liberty-02, at 2, Table I-2.

Liberty's Proposed Safety and Reliability Projects \$(000)								
Project #	Project Name	2019	2020	2021	Total			
1	7300 Line Reconductor	\$1,700	\$1,700	\$1,700	\$5,100			
2	Topaz 1261 Reconductor	\$810	\$810	\$810	\$2,430			
3	625/650	-	\$13,000	-	\$13,000			
4	Olympic Microgrid	-	\$18,000	-	\$18,000			
5	MHP Conversions	\$854	\$3,496	\$1,298	\$5,648			
6	Training Center/Back-up Ops	-	-	\$3,300	\$3,300			
7	NLT Parking Lot BMP Retrofit	\$1,000	-	-	\$1,000			
8	Distribution Replacements	\$8,469	\$8,469	\$8,469	\$25,407			
	Total Safety and Reliability Projects	\$12,833	\$45,475	\$15,577	\$73,885			

3.2.1.1. 7300 Line Reconductoring

We authorize the construction of Line 7300 reconductoring and the annual \$1.7 million of cost recovery for years 2019-2021. The project has a multi-year scope, and its forecasted capital cost is less than \$4 million per year; therefore, we grant an exception and authorize Liberty cost recovery via PTAM on actual cost data and in-service dates.

Liberty states that the 7300 Line project will reduce the outage times (measured by the System Average Interruption Duration Index ("SAIDI")) on the 7300 Circuit by gaining the ability to transfer customer load to the 3400 Circuit when problems arise. It adds that the project will add more relay enabled reclosers and modernize the line with new poles, cross-arms, and hardware, which will allow for improved fault isolation and greater flexibility for power restoration. It

¹⁴ Liberty-02, at 5, line 2-6.

¹⁵ *Id*.

Cal Advocates does not oppose Liberty's proposal to build Line 7300 Reconductoring and related cost forecast for 2019.¹⁶

We find that the 7300 Line Reconductoring project is vital for safety and risk mitigation. This Decision approves the capital expenditure of \$1.7 million for inclusion in the 2019 Test Year revenue requirement. We also authorize a budget of \$1.7 million per year for 2020 and 2021. As this is a multi-year project, we grant Liberty the authority to use the PTAM for 7300 Line Reconductoring for 2020 and 2021 based on actual cost data and in-service dates. The cost recovery via PTAM for years 2020- 2021 is capped at \$3.4 million.

3.2.1.2. Topaz Line Rebuild Project

We authorize construction for the Topaz Line Rebuild and the \$810,000 cost recovery in the 2019 revenue requirement. The project has a multi-year scope, and its forecasted capital cost is less than \$4 million per year; therefore, we grant an exception and authorize Liberty cost recovery via PTAM on actual cost data and in-service dates.

Liberty plans to reconductor segments of the 1261 circuit. It claims this was the worst-performing circuit in 2016 and 2017 in its service territory. 17
Liberty also states reconductoring the 1261 Circuit will have a significant impact by modernizing the line with new poles, cross-arms, and hardware where necessary and, in turn, reducing SAIDI and System Average Interruption
Frequency Index ("SAIFI") metrics. It further adds that this project will also mitigate the risk of fires sparked from downed wires on the circuit. 18

¹⁶ Cal-Advocates-07, at 6, line 13-16.

¹⁷ Liberty-02, at 6, line 7-9.

¹⁸ Liberty-02, at 9, line 1.

Cal Advocates does not oppose the project and related costs for 2019. ¹⁹
We find it reasonable to approve the project for it adds to Liberty's system reliability, wildfire risk mitigation, and a stronger circuit system. Costs are approved for this project from 2019 through 2021. This Decision approves the capital expenditure of \$0.81 million for inclusion in the 2019 Test Year revenue requirement. Liberty may use the PTAM for Topaz Line Rebuild for 2020 and 2021 based on actual cost data and in-service dates. The cost recovery is capped at \$1.62 million for PTAM recovery.

3.2.1.3. 625/650 Line Upgrade Project

We authorize the construction of the 625/650 Line Upgrade Phase II project and rate recovery via PTAM on actual cost data and in-service dates. The cost recovery via PTAM is capped at \$13 million.

The proposed 625/650 Line Upgrade is a Phase II of a larger project approved in D.15-03-020. In phase II, Liberty proposes to construct upgrades and improvement in Liberty's transmission system in the North Lake Tahoe area (the "625/650 Line Upgrade Project").²⁰ The project includes decommissioning of the Brockway Substation, adding two line terminals for the Northstar and Tahoe City transmission lines, two new substation transformers and associated circuit breakers, switches, support structures, foundations, grounding and conduit systems, and an enclosed switchgear unit serving four distribution feeders.²¹ Liberty forecasts \$13 million of project cost recovery in 2020.²² The

¹⁹ Cal Advocates-07, at 7, line 7-8.

²⁰ In D.15-03-020, the CPUC issued a permit to construct Phase 1 of the Project. Liberty was also granted permission to construct Phase II subject to verification that the peak load growth on the North Lake Tahoe Transmission System approached 89 megawatts.

²¹ Liberty-10, at 13, line 11-16.

²² *Id*.

project will upgrade a portion of Line 650 from 60kV to 120kV. Liberty asserts that by upgrading the last stretch of Line 650 from 60kV to 120kV Liberty will complete the new ring bus at North Truckee Terminal, which will improve system reliability and switching capability, and enhanced operational flexibility for the facilities serving Liberty's customers in the Kings Beach area. ²³

Liberty argues that according to D.15-03-020 and Commission Resolution E-4929, Liberty has shown that its system has reached the "trigger point" or the peak load growth on the North Tahoe Transmission System of 89 megawatts.²⁴ Liberty further states that Brockway substation poses a high fire danger, and under Ordering Paragraph 13 of D.19-05-040, it is seeking formal approval to replace the substation in this application.²⁵

We find that Liberty submitted a revised 2019 North Tahoe Transmission System Analysis, according to D.15-03-020 and Commission Resolution E-4929.²⁶ We also find that the updated 2019 North Tahoe Transmission System Analysis report states the 2018-2019 peak load reached 95.9 MW, which is within 2.5 MW of 98.4 MW "trigger" established by the analysis²⁷ and higher than the threshold trigger set by D.15-03-020.²⁸ These findings support the construction of 625/650 Line Upgrade Project Phase II.

²³ Liberty -02, at 18-20.

²⁴ Liberty-10, at 14, line 5-19.

²⁵ *Id*.

²⁶ Liberty-10, Rebuttal Testimony, at 14, line 12-13 and Attachment 6 - 2019 North Lake Tahoe Transmission System Analysis.

²⁷ Liberty-10, Rebuttal Testimony, Attachment 6, at 1-1.

²⁸ D.15-03-020, COL 7.

Our review of the Application finds an immediate need to approve decommissioning of Brockway Substation and expanding the Kings Beach substation as mitigation against wildfire risk in the future summer season.

We see merit in approving the 625/650 Line Upgrade because 95 percent of the line miles from Truckee to Kings Beach are already built at the $120 \, kV$ standard, and it is the last half mile that is at $60 \, kV$ that needs upgrading. It is prudent to build this last half mile and complete the new ring bus, which will strengthen Liberty's transmission network.

This Decision authorizes the construction of the 625/650 Upgrade Project Phase II, as proposed in this Application.

625/650 Line Upgrade Phase II project cost is eligible for recovery via PTAM for 2020 and 2021 based on actual cost data and in-service dates. The cost recovery via PTAM is capped at \$13 million.

For Phase III of the 625/650 Line Upgrade project, this Decision guides Liberty to explore options and revisit its old and outdated assumptions. D.15-03-020 and events since 2015 argue for a revised look at the timing and need for Phase III. In D.15-03-020, the Commission found that if the critical assumptions in the new network study have not changed with the time between Phase II and the Phase III Advice Letter filing, then Liberty does not need to perform a second network study. Liberty should endeavor to revisit its initial assumptions and explore alternatives. For instance, since planning this multi-year project five years ago, there have now been implemented wildfire mitigation measures, which should be considered and can be expected to result in revisions to the plan. Liberty acknowledged presciently, in A.10-08-024, that other conditions relating to best-ensuring reliability and safety on Liberty's

system would influence whether they would pursue later phases.²⁹ The old threshold system peak or other indicators identified as triggers to assess the need for the next stage may not be relevant. Therefore, Liberty's proposal for Phase III must be based on the current infrastructure needs, rather than outdated information.

In response to November 4, 2019, ALJ ruling seeking additional information on residential rate design and capital project planning, Liberty states that the addition of a microgrid at the Olympic Valley could defer Phase III by three years. ³⁰ Exploration of alternatives like this is warranted. Therefore, a separate application process, not an advice letter, could better assist the Commission in making the proper determination for the construction of Phase III.

3.2.1.4. Olympic Valley Microgrid

We deny Liberty's proposal to recover \$18 million from ratepayers in this GRC.

Liberty is proposing a \$17.95 million microgrid project in 2020.³¹ The project features the installation of a microgrid in the Olympic Valley, including an 8MW/32 MWh battery energy storage system ("BESS") comprised of 72 Tesla Powerpack systems (each of which has 210 kWh of energy storage capacity), and 4 Tesla bi-directional inverters.³² Liberty states that the microgrid will provide reliability, voltage support, and resiliency to Olympic Valley customers in the

²⁹ D.15-03-020, at 33.

³⁰ Liberty-12, at 7.

³¹ Liberty-02, at 15.

³² Liberty-02, at 13, line 11-15.

event of an outage.³³ Liberty also notes that Squaw Valley Alpine Meadows has agreed to contribute \$100,000 annually to cover future operating expenses and mitigate against the rate impact of the project cost.³⁴

Based on the evidence in this Application and Liberty's response³⁵ to November 4, 2019 ALJ ruling seeking additional information on the operational and cost recovery aspects of the project, we find that this project is not ready for consideration in this GRC. Liberty can file a separate application when better information and design characteristics are known. We encourage Liberty to contact Energy Division to ensure the thoroughness of a new application.

We find the project conceptualization and vendor selection process arbitrary. Liberty states that Squaw Valley Resort offered some of the terms in this partnership, such as their willingness to provide the land for the project at a highly favorable lease rate and provide earth-moving services if Liberty partnered with Tesla.³⁶ Based on its solicitation process in Alpine County Battery Storage Project, which was awarded to Tesla, Liberty decided to continue planning the Olympic Valley project worth \$18 million with Tesla without a competitive solicitation process.³⁷ The localized nature of the benefit must go through a more robust review.

We find that Liberty's information on alternative #2³⁸ stops short on why it did not further explore its feasibility. Specifically, it considers installing a new

³³ Liberty-02, at 14, line 1-6.

³⁴ Liberty-02, at 14, line 12-14.

³⁵ Response served as Exhibit Liberty-12, Supplemental Testimony on Rate Design and Capital Project.

³⁶ Liberty-12, at 8, line 17-28.

³⁷ *Id*.

³⁸ Liberty-02, at 14, line 15-24.

conduit along the 8300 circuit and new trenching and vaults near the Olympic village to tie into the existing conduit system going up the mountain at an estimated cost of \$3.4 million.³⁹ However, it does not explain any further why and how this alternative is not better suited. The Commission needs more information on why a lower-cost option is not reasonable.

Liberty assumes the Olympic Valley Battery Storage units are necessary because of the 60KV loop serving North Tahoe.⁴⁰ In this Decision, we are approving the 625/650 Line Upgrade Phase II, which will upgrade the North Tahoe loop to a 120 kV. Liberty needs to consider the reliability concerns mitigated with the upgrade in conjunction with Alternative #2. The Commission needs to know the implications of approving line 625/650 Phase II updates on the need analysis applied for the Olympic Valley storage project.

Liberty uses deferral costs of Phase III of the 625/650 Line Upgrade as a revenue stream in its cost-effectiveness analysis.⁴¹ However, Liberty does not base the cost comparison on the net-present-value (NPV) concept that would allow converting all future costs and benefits to their present values. Therefore, the Commission cannot appropriately weigh the alternatives of this storage project against the deferral of another capital project. Liberty should demonstrate the NPV cost comparison to the Commission to support its recommendation.

Lastly, in its response to November 4, 2019 ALJ Ruling, Liberty shared that the capital plant addition costs are embedded in its distribution ratebase, and all customers would pay for the Olympic Valley Microgrid through its distribution

³⁹ *Id*.

⁴⁰ Liberty-12, at 8, line 1.

⁴¹ Liberty-02, Workpapers, at 15-39.

charge.⁴² We also found that less than 20 percent of the residential load served by this project are primary homeowners.⁴³

While we acknowledge that building a microgrid may benefit local entities, the Squaw Valley Ski Resort, and the businesses supporting the local economy, Liberty needs to provide more information. In a separate application, Liberty can present the success rate and cost-benefit of selecting Tesla if it does not undertake competitive solicitation, a more thorough evaluation of alternatives, implications of 625/650 Line Upgrade in North Tahoe area and meaningful overall cost-effectiveness analysis.

We deny Liberty's proposal to recover \$18 million from ratepayers in this GRC for the Squaw Valley microgrid project.

3.2.1.5. Mobile home park meter conversion

We deny the inclusion of "budgeted" costs in 2019 ratebase and direct Liberty to request cost recovery of "actual" costs per D.14-03-021 and D.20-04-004.

Per D.14-03-021, Liberty proposes to continue its voluntary conversion of electric and gas master-metered service at mobile home parks and manufactured housing communities (collectively, "MHPs") to direct service.⁴⁴ It adds that these meter conversions promote service, reliability, and overall safety at the mobile housing communities.⁴⁵ Liberty's cost forecast falls in a range of \$12,000 to \$19,000 per space conversion, which is based on the number of spaces at each MHP to convert at the average "to the meter" cost and "beyond the

⁴² Liberty-12, at 6, line 28-31.

⁴³ Liberty-12, at 6, line 9-12.

⁴⁴ Libery-02, at 16, line 5-8.

⁴⁵ *Id*.

meter" conversion cost.⁴⁶ Liberty projects \$5.64 million spend over three years (2019-2021).⁴⁷

Cal Advocates does not oppose Liberty's proposal and cost forecast.

We find it reasonable for Liberty to continue work on meter conversions. However, Liberty is required to recover actual, prudently incurred program costs via a balancing account, as approved in D.14-03-02148 and as retained in D.20-04-004.⁴⁹ In D.14-03-021, the Commission found that numerous uncertainties in this program that underlie the parties' construction cost estimates make forecast ratemaking highly "speculative" and that "utilities should fully recover actual, reasonably incurred costs for new MHP Distribution Systems."50 Based on the Commission's guidance, that actual costs be reviewed for approval, not budgeted costs, we do not approve the cost recovery of Liberty's budgeted MHP meter conversions via the 2019 GRC revenue requirement. Furthermore, D.14-03-021 prescribed that "all reasonable, actual construction costs, both 'to the meter' and 'beyond the meter,' should be capitalized."51 Review for reasonableness of "to the meter" costs will occur in the general rate case when costs are included in the ratebase. Review for reasonableness of "beyond the meter" costs will happen in the first general rate case *after* [emphasis added] service cutover.⁵²

⁴⁶ Liberty-02, at 17, line 9-17.

 $^{^{47}}$ Liberty-02, Workpaper, at 40.

⁴⁸ D.14-03-021, OP 8, at 78.

⁴⁹ Decision issued in R.18-04-018 adopts the cost recovery mechanism adopted in D.14-03-021.

⁵⁰ D.14-03-021 FOF 35, at 69 and 49.

⁵¹ D.14-03-021 FOF 36, at 71.

⁵² D.14-03-021, Ordering Paragraph 8.

The Commission's guidance is clear that while Liberty is authorized to recover, in distribution rates, the costs of the MHP meter conversion program approved in D.14-03-021. The costs are subject to reasonableness review. Liberty did not submit actual costs for "to the meter" and "beyond the meter," and instead is seeking to include budgeted costs of the project in its entirety in ratebase that will earn a return. Liberty may only include its actual costs of meter conversion in the ratebase. We deny the inclusion of budgeted costs in 2019 ratebase and require Liberty to file its actual expenses for cost recovery to continue via the MHP program balancing account.

3.2.1.6. North Lake Tahoe (NLT) Parking Lot Best Management Practices (BHP) Retrofit

We authorize construction and \$1.2 million of cost recovery for this project in the 2019 revenue requirement.

Liberty plans to redesign the current parking lot configuration at the Tahoe Vista Office to add parking spaces and storage yard space.⁵³ Liberty states that the retrofit of existing parking lost is needed to meet the compliance and safety requirements of the Tahoe Regional Planning Agency.⁵⁴ The project will cost \$1.2 million and be recovered in the 2019 revenue requirement.⁵⁵

Cal Advocates agrees with Liberty's methodology for determining the 2019 forecast for this category and does not oppose Liberty's 2019 estimate of \$1.2 million for this project.

We find the project scope and costs reasonable. The project will allow help Liberty to facilitate parking for every employee on-site in a designated area,

⁵³ Liberty-02, at 25, line 13-14.

⁵⁴ Liberty-02, at 25, line 17-25.

⁵⁵ Liberty-02, at 26.

alleviating safety concerns. This Decision approves \$1.2 million for recovery in the 2019 Test Year revenue requirement.

3.2.1.7. Distribution Replacement

We authorize Liberty to construct its proposed projects in the Distribution Replacement category. We authorize Liberty \$6.3 million of cost recovery in the 2019 revenue requirement. Liberty may seek cost recovery up to \$6.3 million per year via PTAM of actual cost data and in-service dates.

The scope of the project involves the replacement of equipment based on routine inspections, failure, and proactive replacement of distribution assets based on age.⁵⁶ Liberty requested \$8.47 million annually (2019-2021) in its Application.⁵⁷ There are fourteen project categories under Distribution Replacements, and Liberty based its forecast for six of the fourteen projects on the five-year (2013 through 10 2017) average of recorded costs. The estimates for another six projects were based on 2017 actual costs, and the forecast for two projects was budget based.⁵⁸

Cal Advocates recommends a 2019 forecast of \$6.3 million based on a five-year average of actual expenditures from 2014 through 2018.⁵⁹

Liberty revised its forecast for 2019 from \$8.47 million to \$6.62 million.⁶⁰ It accepts Cal Advocates' use of more recent recorded data to develop a Distribution Replacements cost forecast with a caveat that recorded dollars for 2014-2018 should be normalized to 2018 dollars, using the same 2.35 percent

⁵⁶ Liberty-02, at 18, line 17-18.

⁵⁷ Liberty-02, at 19, Table I-7.

⁵⁸ Cal Advocates-07, at 9, line 9-13.

⁵⁹ Cal Advocates-07, at 9, line 14-17.

⁶⁰ Liberty-10, Rebuttal Testimony, at 8, Table II-2.

annual escalation factor it used in its O&M estimates for 2020 and 2021.⁶¹ Specifically for Overhead Services related Distribution Replacement project category, Liberty wants to use 2018 recorded costs, as opposed to a five-year average cost.⁶² Liberty argues costs have steadily increased since 2013, and 2018's recorded cost is the most accurate forecasting methodology for this project category.⁶³

The Commission finds the scope of 2019 Distribution Replacements reasonable. These projects are aimed to improve the safety and reliability of Liberty's distribution infrastructure. Regarding Distribution Replacements cost estimates, we accept Cal Advocates' forecasting methodology to use the most recent five-year average of costs (2014-2018). We find the five-year average cost methodology just and reasonable.

We do not find Liberty's recommendation to use an escalation factor of 2.35 percent reasonable. Once approved, the Distribution Replacements cost will earn an authorized rate of return as part of ratebase. Therefore, it is not prudent to escalate forecasted Distribution Replacements cost in addition to earning a rate of return on these "yet to be built" projects.

Liberty did not provide sufficient supporting information on why it is reasonable to use 2018 costs for its Overhead Services project category other than stating that last year's recorded forecast is the most accurate forecasting methodology. We find it reasonable to use the same forecasting methodology of a five-year (2014-2018) average cost, as used for other project categories.

⁶¹ Liberty-10, at 9, line 4-6.

⁶² Liberty-10, at 9, Line 9-14.

⁶³ Id.

This Decision adopts Cal Advocates' cost forecast for Distribution Replacements of \$6.3 million for the 2019 Test Year revenue requirement. Liberty may seek cost recovery via PTAM for 2020 and 2021, consistent with the schedule stated in the PTAM section above. We cap the cost recovery at \$6.3 million per year.

		,	•		
	Liberty's Cust	omer-Driven P	rojects \$(000	O) ⁶⁴	
Project #	Project Name	2019	2020	2021	Total
1	Meters New Business	\$210	\$210	\$210	\$630
2	Customer New Business	\$527	\$527	\$527	\$1,581
3	Claims	\$141	\$141	\$141	\$423
4	Rule 20 Tahoe Vista	\$3,600	\$2,000	\$500	\$6,100
5	Rule 20 Apache Ave	\$750	\$475	\$475 ⁶⁵	\$1,700
	Total Customer Driven Projects	\$5,228	\$3,353	\$1,853	\$10,434

3.2.2. Customer Driven Projects

3.2.2.1. New Service Installations and Claims

We authorize \$0.76 million in cost recovery for new service installation, which includes costs in Meters New Business, Customer New Business, and Claims subcategories, via the 2019 revenue requirement.

Liberty forecasts new service installations for residential and commercial customers and capital expenses to cover claims for customer-related damages to Liberty's capital assets that need replacement.⁶⁶ Liberty requested \$0.87 million in its Application. Cal Advocates recommends a 2019 forecast of \$0.76 million. Cal Advocates' recommendation is based on the more recent five-year average of actual expenditures covering 2014 through 2018.⁶⁷

⁶⁴ Liberty-02, at 21, Table I-8, at 21, line 7-17 and at 23, Table I-9.

⁶⁵ Liberty forecasted \$925,000 for 2020 and 2021.

⁶⁶ Liberty-02, at 22, line 20-23.

⁶⁷ Cal-Advocates -07, at 12, line 3-12.

We find Cal Advocates' methodology reasonable as it represents the average funds spent on new service installations. Liberty accepts Cal Advocates' use of more recent recorded data to develop the forecasts for Customer-Driven Programs. However, Liberty recommends adjusting the recorded 2014-2018 dollars to 2018 dollars, using the same 2.35 percent annual escalation factor Liberty used in its O&M forecasts for 2020 and 2021.⁶⁸ We do not agree with Liberty's proposal to escalate the costs.

The Commission approves the scope of these projects for recovery as part of Liberty's 2019 revenue requirement. We do not find it reasonable and prudent to escalate capital project costs in addition to allowing these costs to earn a rate of return. Therefore, we deny the use of a 2.35 percent escalation factor. We approve Cal Advocates' 2019 capital cost forecast of \$0.76 million for new service installation and claims under Customer-Driven Projects.

3.2.2.2. Rule 20A

We accept Liberty's 2019 cost forecast of \$4.35 million for Tahoe Vista and Apache Avenue projects and allow recovery via the 2019 revenue requirement. Beyond 2019 Liberty may apply for PTAM recovery by consolidating project costs for both Tahoe Vista and Apache Avenue Rule 20A projects. The total project costs in 2020 and 2021 are close to the threshold \$4 million; therefore, we grant an exception and allow cost recovery via PTAM under major projects category.

Liberty plans to spend \$7.8 million for Rule 20A between 2019 and 2021.⁶⁹ The cost estimates are for (a) Tahoe Vista (Placer County) Rule 20A project, forecasted at \$6.25 million, of which \$3.6 million is for 2019, \$2.0 million is for

⁶⁸ Liberty-10, at 10-11.

⁶⁹ Sum of data from Liberty-02, Table I-8, at 21 and at 22, line 7.

2020, and \$0.5 million is for 2021^{70} and (b) Apache Avenue (El Dorado County) project with a forecast of is \$1.7 million, of which \$750,000 is in 2019, and \$925,000 is for 2020 and $2021.^{71}$

According to Liberty, these Rule 20A projects will underground overhead lines in the respective counties and plan and design for the next Rule 20 project.

Under Rule 20, the Commission requires the utility to allocate a certain amount of money each year for conversion projects. The Rule 20A projects should be in the public interest, such as removing a closely-packed line, be on a high traffic way, or in a scenic area.⁷² According to Liberty, Rule 20A allocated funds on Tahoe Vista will offset Liberty's capital expenditures upon project completion and will serve to benefit the community served by eliminating a high concentration of overhead lines in the area.⁷³ Liberty states that the project will be a joint utility project with the phone and cable utilities, and being the lead utility for the substructure installation, it will be reimbursed by the other utilities for design and permitting costs.⁷⁴ Liberty meets the criteria to underground overhead lines, and we find it reasonable to approve Liberty's request to underground their facilities. We accept \$4.3 million in cost recovery for Tahoe Vista and Apache Avenue projects for the 2019 revenue requirement.

We see merit in consolidating the cost recovery of both Tahoe Vista and Apache Avenue projects to allow Liberty cost recovery via PTAM under the Major Plant Additions category. Liberty may seek cost recovery via PTAM as it

⁷⁰ Liberty-02, at 20, line 12.

⁷¹ Liberty-02, at 22, line 7-11.

⁷² https://www.cpuc.ca.gov/General.aspx?id=4403

⁷³ Liberty-02, at 20, line 5-9.

⁷⁴ *Id*.

completes the projects or its phases. Upon completion of the two undergrounding projects proposed in this application or a stage, Liberty shall record its cost in its electric plant account for inclusion in its rate base. The overall cost for recovery via PTAM is capped at \$3.42 million.

3.2.3. Grid Automation Projects

3.2.3.1. Advanced Metering Infrastructure ("AMI")

We approve Liberty's \$9 million cost forecast for AMI deployment in 2020. Liberty may apply for PTAM recovery based on actual cost data and in-service dates.

Liberty forecasts \$9 million in 2020 to complete this project.⁷⁵ Liberty states that remote metering capability will mitigate safety risks to meter readers, allow faster outage detection and restoration of service; reduce reliance on estimated meter reads when weather conditions become severe (including those experienced in January 2017); and allowing for remote disconnection and reconnection of seasonal customers, which will reduce current labor costs.⁷⁶

We approve the recovery of the expenses via the PTAM mechanism. The AMI project costs qualify under major plant additions category, and once Liberty implements the project, it can file for cost recovery of actual costs via PTAM. The costs for recovery are capped at \$9 million.

3.2.4. Other Projects

Liberty requests \$4,820,730 for multiple projects listed in this category, such as fleet replacement, EV Charging infrastructure, information technology infrastructure, and workspace upgrades.

Liberty's Other Projects \$(000)

⁷⁵ Liberty-02, at 25, line 7

⁷⁶ Liberty-02, at 24-25.

	Other Projects	2019	2020	2021	Total
1	Fleet	\$2,059,047	\$1,404,730	\$1,196,910	\$4,660,687
	Transportation	\$2,195,000			
2	Electrification	Ψ2,190,000			\$2,195,000
3	Employee Workstations	\$75,621	\$75,621	\$75,621	\$226,863
4	Information Technology	\$491,062	\$491,062	\$491,062	\$1,473,186
5	Office Upgrade			\$6,600,000	\$6,600,000
	Total Other Projects	\$4,820,730	\$1,971,413	\$8,363,593	\$15,155,736

Summary of Liberty and Cal Advocates' position for 2019 projects listed under this category:

Other Projects	Liberty	Cal Advocates	Difference
Fleet	\$2,059,047	\$974,000	\$1,085,047
Transportation Electrification	\$2,195,000	\$2,195,000	-
Employee Workstations	\$75,621	\$75,621	-
Information Technology	\$491,062	\$268,000	\$223,062
Total Other Projects	\$4,820,730	\$3,512,621	\$1,308,109

3.2.4.1. Fleet replacement

We authorize Liberty cost recovery of \$974,000 in 2019 revenue requirement.

Liberty forecasts spending \$2.059 million in 2019 on the fleet replacement.⁷⁷

Cal Advocates recommends a fleet vehicle replacement budget of \$0.97 million for 2019 based on Liberty's five-year average of vehicle replacements.⁷⁸ It states that Liberty is requesting a 2019 budget of \$2.06 million, which is over twice its five-year average of historical expenditures for fleet replacements without explaining why its fleet replacement needs have more than doubled.⁷⁹ It

⁷⁷ Liberty-02, at 29, Table 1-11.

⁷⁸ Cal Advocates-07, at 16, line 14-16.

⁷⁹ Cal Advocates Opening Brief, at 9.

states that Liberty did not produce documents demonstrating where or how it obtained these costs or other evidence to support its request. Cal Advocates contends that the detailed itemization of these cost categories was a list of each vehicle it wants to purchase and cost.⁸⁰

Liberty claims that its estimates use its fleet replacement guidelines, which consider the age and/or mileage limitations for each vehicle.⁸¹ It states that they provided Cal Advocates detailed itemizations in its fleet forecast workpapers for 2019-2021, including a comprehensive breakdown of vehicles to be replaced or purchased for new requirements, together with cost estimates for each vehicle that include the vehicle, tax, registration, and other costs.⁸²

Liberty's claim is not convincing that a list of each vehicle with the information, as mentioned above, is adequate to project fleet replacement needs and costs. Liberty has not established a link between fleet retirement conditions, fleet inventory, the need for replacing certain vehicles, and the cost of replacement.

Based on the evidence, we find it reasonable to approve an estimate that Liberty has operated with in the past to meet its needs on the fleet requirement. We find Cal Advocates' recommendations reasonable and approve \$974,000 in fleet replacement for 2019.

3.2.4.2. Transportation Electrification

We authorize a capital expenditure of \$2,195,000 as part of the 2019 revenue requirement for EV Charging capital projects.

⁸⁰ *Id*.

⁸¹ Liberty opening brief, at 16.

⁸² *Id*.

Liberty states that CPUC approved \$2.418 million in transportation electrification capital projects for Liberty on September 27, 2018, in D.18-09-034.⁸³ Liberty's plan includes the installation of DC fast chargers in Liberty service territory and installation of EV bus infrastructure. Liberty is proposing to include \$2,195,000 in the revenue requirement forecast for 2019.⁸⁴

Cal Advocates does not oppose the scope and cost estimates.

Per D.18-09-034, Liberty is authorized for cost recovery of \$2,195,00 for DC fast chargers.⁸⁵ For ratemaking, we adopt \$2,195,000 as part of the 2019 revenue requirement for EV Charging capital projects.

3.2.4.3. Workstations

We deny Liberty's cost estimates of \$75,621 for employee workstations for lack of supporting information.

Cal Advocates forecasts \$75,621 in 2019 for employee workstations.86

In Liberty's Application, there is no reference to "employee workstations" projects and related costs of \$75,621. In its rebuttal testimony, Liberty does not explain how and why it is proposing \$75,621 for 2019-2021. Without a proper explanation of what this money will be used for, we cannot approve these costs and unduly burden the ratepayers. If Liberty has workstation upgrade needs, then it needs to explain and support it with data. We deny \$75,621 categorized as Employee Workstation costs.

⁸³ Liberty-02, at 30, line 1-6.

⁸⁴ Liberty-10, at 7.

⁸⁵ D.18-09-034, OP 1.

⁸⁶ Cal Advocates-07, at 17, line 15-19.

3.2.4.4. Information Technology (IT)

We adopt \$268,000 for the 2019 cost recovery of Information Technology infrastructure.

Cal Advocates recommends \$0.27 million for 2019.87 They estimate the cost of a four-year average of Liberty's IT costs.88 Cal Advocates states that the use of a four-year average (2015-2018) is more reasonable than the use of a five-year average (2014-2018) in this instance because incorporating the 2014 IT budget skews Liberty's IT needs, as the 2014 IT budget was substantially higher than other years.89 Cal Advocates adds that Liberty also failed to provide adequate supporting documentation to explain and support its IT request.90

Liberty's application did not request cost recovery for IT infrastructure needs. However, in its rebuttal, it argues that Liberty's expenses result from its corporate IT initiatives for enterprise-wide software upgrades and license renewals allocated to Liberty.⁹¹

The cost data is summarized below with Liberty's request⁹²

	Historic (\$ Thousand)				5-yr Avg	4-yr Avg	Liberty's 2019		
	2014		2015	2016	2017	2018			Proposed Cost
IT Costs	\$2,300	\$	349	\$262	\$182	\$280	\$675	\$268	\$491

We agree with Cal Advocates. Liberty does not provide the basis of cost allocation from its parent company. Moreover, we do not find a break-up of

⁸⁷ Cal Advocates-07, at 18, line 9.

⁸⁸ Id.

⁸⁹ Cal Advocates Opening Brief, at 1.

⁹⁰ *Id*.

⁹¹ Liberty-10, Attachment 4.

⁹² Cal Advocates-07, at 18.

costs on whether the requested project cost is for "license renewal" or "software upgrades." Software upgrades could be treated as capital while license renewal as O&M. Given the lack of clarity, we agree with Cal Advocates' estimates and find that a four-year average is more reasonable than including Liberty's 2014 cost, which is an outlier. Therefore, we adopt \$268,000 for the 2019 cost recovery of the Information Technology infrastructure.

3.2.4.5. Office Remodeling

Liberty is proposing an office building remodeling project. Liberty's forecast includes \$3.3 million for the North Lake Tahoe Office Building remodel project and \$3.3 million for the South Lake Tahoe Office Building remodel project. The plan is to renovate two office buildings in 2021. The repairs will allow the buildings to meet standards for efficient heating and water and lighting systems, reduce environmental impact, and enable Liberty to accommodate changes in personnel demands as operations and activities continue to increase. 94

We find Liberty's request reasonable, and to the extent, it can demonstrate actual money spent on these remodeling projects, it can recover it through PTAM. However, the timing of the project construction may align better with cost recovery planned in the next GRC cycle.

⁹³ Liberty Opening Brief, at 9.

⁹⁴ Liberty -10, at 16, line 5-10.

3.2.5. Summary for 2019 Capital Forecast

This Decision approves the following projects for cost recovery in the 2019 revenue requirement –

TABLE 1 – 2019 Capital Forecast Recommended and Approved

TABLE 1 - 201) Capital Porecust Recommended and Approved								
	Liberty	Cal Advocates	CPUC Approved					
Safety and Reliability Projects								
7300 Line Rebuild	\$1,700,000	\$1,700,000	\$1,700,000					
Topaz 1261 Line Reconductor	\$810,000	\$810,000	\$810,000					
Mobile Home Park Conversion	\$854,000	\$854,000	\$0					
NLT Parking Lot BMP Retrofit	\$1,200,000	\$1,200,000	\$1,200,000					
Distribution Replacements	\$6,860,773	\$6,303,948	\$6,303,948					
Total Safety and Reliability	\$11,424,773	\$10,867,948	\$10,013,948					
Customer-Driven Programs								
Meters New Business	\$210,000	\$223,000	\$223,000					
Customer New Business	\$526,936	\$408,000	\$408,000					
Claims	\$141,450	\$133,000	\$133,000					
Rule 20 A	\$4,350,000	-	\$4,350,000					
Total Customer-Driven	\$5,228,386	\$764,000	\$5,114,000					
Other Projects								
Fleet	\$2,059,047	\$974,000	\$974,000					
Transportation Electrification	\$2,195,000	\$2,195,000	\$2,195,000					
Employee Workstations	\$75,621	\$75,621	\$0					
Information Technology	\$491,062	\$268,000	\$268,000					
Total Other Projects	\$4,820,730	\$3,512,621	\$3,437,000					
Grand Total	\$21,473,889	\$15,144,569	\$18,564,948					

3.2.6. Summary for Post-Test Years 2020-2021 Capital Forecast

Table 2 - 2020 and 2021 Capital Forecast for PTAM

	2020 – Liberty Forecast	2021- Liberty Forecast	Costs Recoverable Via PTAM	PTAM exceptions ⁹⁵ , Approvals and Denials
Safety and Reliability Projects				
7300 Line Rebuild	\$1,700,000	\$1,700,000	\$3,400,000	Exception granted
Topaz 1261 Line Reconductor	\$810,000	\$810,000	\$1,620,000	Exception granted
MHP Conversions	\$3,496,000	\$1,298,000	\$4,794,000	Only Actuals
Distribution Replacements	\$6,300,000	\$6,300,000	\$12,600,000	PTAM Eligible
625/650 Phase 2	\$13,000,000		\$13,000,000	PTAM Eligible
Olympic Valley Microgrid	\$18,000,000		\$0	Denied
Customer-Driven Programs				
Meters New Business	\$233,661	\$233,661	\$0	Denied
Customer New Business	\$428,129	\$428,129	\$0	Denied
Claims	\$138,848	\$138,848	\$0	Denied
Rule 20 Tahoe Vista & Apache Ave	\$2,000,000	\$1,425,000	\$3,425,000	Exception granted
AMI	\$9,000,000		\$9,000,000	PTAM Eligible
Other Projects				
Fleet	\$1,404,730	\$1,196,910	\$0	Denied
Employee Workstations	\$75,621	\$75,621	\$0	Denied
Information Technology	\$491,062	\$491,062	\$0	Denied
North and South Lake Tahoe Bldg Upgrade		\$3,300,000	\$6,600,000	PTAM Eligible
Training Center/ Back-up Ops		\$3,300,000	\$0	Denied
Grand Total	\$57,078,051	\$23,997,231	\$54,439,000	

⁹⁵ PTAM Exceptions = for projects below \$4 million PTAM threshold; PTAM Eligible = Projects that already meet the \$4 million PTAM threshold and Denied = Projects cannot seek recovery via PTAM. PTAM cost recovery is based on actual costs.

3.3. Cost of Capital

This Decision approves a Weighted Average Cost of Capital (WACC) of 7.63 percent and a Return on Equity (ROE) of 10 percent. The Decision retains the existing capital structure and cost of debt.

Liberty proposes a WACC of 10.05 percent based on an ROE of 14.6 percent. Liberty initially requested an ROE of 10.3 percent but revised its request in the rebuttal testimony by adding a wildfire risk premium of 430 basis points.

Cal Advocates and A-3 CC do not oppose Liberty's proposed capital structure and cost of debt. The difference in position arises from the recommended ROE.

The table summarizes the difference in Liberty and Cal Advocates' positions -

		Liberty		Cal Advocates		
	% of Total	Cost %	WACC %	% of Total	Cost %	WACC %
Debt	47.50%	2.38%	2.38%	47.50%	5.01%	2.38%
Equity	52.50%	14.60%	7.67%	52.50%	8.62%	4.54%
	100%		10.05%	100%		6.91%

A-3 CC opposes the wildfire risk premium of 430 basis point.

To calculate its ROE, Liberty relies on the following models: Discounted Cash Flow (DCF), two variants of Risk Premium, and three variants of Capital Asset Pricing Model (CAPM).⁹⁶ Liberty adjusts the results of these methodologies upward by 430 basis points to account for higher than average business risk compared to the proxy group. ⁹⁷ In its request for a 14.6 percent ROE, Liberty

⁹⁶ Liberty-11, at 1, line 16-20.

⁹⁷ *Id*.

states that the proposed ROE reflects the significant additional business risks due to wildfires that should be considered and reflected in its cost of capital.⁹⁸

Cal Advocates bases its results on a mid-point average of DCF, traditional CAPM, and Risk Premium models using Liberty's proxy group. Cal Advocates recommends an ROE of 8.62 percent.⁹⁹

Comparison of Liberty and Cal Advocates' Recommended ROE					
	Liberty	Cal Advocates			
DCF Constant Growth	8.8%	8.05%			
Risk Premium (Historical Returns)	10.3%	10.20%			
Risk Premium (Authorized Returns)	10.2%	-			
Traditional CAPM	8.6%	7.60%			
Empirical CAPM	9.3%	-			
Modified CAPM	10.1%	-			
Average	9.6%	8.62%			
Size Risk	0.7%	-			
Base ROE	10.3%	8.62%			
Wildfire Adjustment Requested to base ROE	4.3%	-			
ROE Recommendation	14.6%	8.62%			

For financial modeling, Cal Advocates used the same proxy group as Liberty, but excluding Dominion Energy and Pacific Gas and Electric Company (PG&E) because these companies do not meet the criteria set in D.07-12-049. 100

Liberty adjusts the results of DCF analysis by excluding the ROE of companies in the proxy group with less than the forecast yield on Baa bonds plus 100 basis points.¹⁰¹

⁹⁸ Liberty opening brief, at 54.

⁹⁹ Cal Advocates -10, at 4, line 16-18

¹⁰⁰ See D.07-12-049, 2007 Cal PUC (LEXIS 593 at 19).

¹⁰¹ Liberty-08, Exhibit TJB-3, Table 6.

For CAPM, Liberty used results from traditional CAPM, empirical CAPM, and a modified CAPM. It states that both the empirical CAPM and modified CAPM recognize the pure/traditional CAPM is incomplete and does not fully account for the higher returns needed on smaller company stocks.¹⁰²

Liberty's results confirm the Commission's findings that empirical CAPMs tend to produce higher overall cost of capital estimates because adjusting betas upward for electric utilities, which tend to have low betas, guarantees a higher ROE.¹⁰³ The Commission's findings on the empirical CAPM also apply to the modified CAPM, because of the use of modified CAPM results in a higher risk premium than a traditional CAPM, which also escalates the ROE and thus leads to a higher cost of capital.

We consider financial, business, and regulatory risk in setting ROE goals for a utility. The financial risk ties to the utility's capital structure. Liberty's proposed capital structure contains 52.5 percent equity and 47.5 percent debt, compared to the average of the electric utility sample of approximately 49.3 percent equity and 51.7 percent debt. We agree with Liberty that having less debt in its capital structure implies that the Company has lower financial risk than those in the electric proxy group. No party opposed its capital structure, and we see no reason to modify it or the cost of debt.

Based on its quantitative analysis, Liberty proposes a business risk or a size study risk metric in the range of 60 to 236 basis points. ¹⁰⁶ We find that

¹⁰² Liberty-08, at 36, line 2-5.

¹⁰³ 1 CPUC3d (1999) 146 at 168-169.

¹⁰⁴ Liberty-08, at 20, lines 15-18.

¹⁰⁵ *Id*.

¹⁰⁶ Liberty-08, at 45-46.

business risk pertains to *new* uncertainties resulting from competition and the economy. An increase in business risk can result from a variety of events that include capital investments, electric procurement, and catastrophic events, such as wildfires. Each of these business risks overlaps into financial and regulatory risk. Liberty recommends a 70 basis point business or size study risk.¹⁰⁷

Regulatory risk pertains to *new* risk that investors may face from future regulatory actions that we, and other regulatory agencies, might take. The Commission has consistently set the rate of return at a level that meets the test of reasonableness as set forth in the <u>Bluefield</u> and <u>Hope</u> cases, and we will continue to do so.¹⁰⁸

In addition to a base ROE request of 10.3 percent, Liberty requests a wildfire risk premium of 430 basis points. We find that Liberty bases its request in large part on its Decision not to participate in the Wildfire Fund established by Assembly Bill (AB) 1054.¹⁰⁹ Upon reviewing the evidence, we agree with A-3 CC and Cal Advocates that Liberty's request to add a wildfire business risk premium is based on its review of testimony presented by other witnesses for other utilities in another Commission proceeding, the consolidated 2020 cost of capital proceeding for the four largest California energy utilities. ¹¹⁰ Liberty did not undertake any study or analyses of its own to support its request of a wildfire risk premium of 430 basis points.

¹⁰⁷ Liberty-08, at 3, line 5-6

¹⁰⁸ The Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1944) and Bluefield Water Works & Improvement Company v. Public Service Commission of the State of Virginia, 262 U.S. 679 (1923).

¹⁰⁹ See Liberty-11, at 11, Line 18 – at 12, line 19-20.

¹¹⁰ See A-3 CC Opening Brief, at 10-11.

In D.19-12-056, the Commission did not authorize a specific wildfire risk premium in the adopted ROE for the three large electric investor-owned utilities.¹¹¹ The Commission stated in that Decision that the passage of AB 1054 and other investor supportive policies in California had mitigated wildfire exposure faced by California's utilities.¹¹²

As we review Liberty's request for a risk premium due to the wildfire threat, we bear in mind the structure of the utility, its service territory, the existing regulatory framework, and risk mitigation measures in place.

Liberty argues that since it is not participating in the wildfire fund, it should be compensated for the wildfire risk. We disagree with Liberty. A-3 CC correctly notes that AB 1054 provided considerable assurance of recovery of wildfire costs even to utilities that elected not to participate in the Wildfire Fund. A-3 CC elaborates that the prudent manager standard in AB 1054 materially improves the likelihood that a utility's actions will be found prudent, which mitigates the risk to shareholders that wildfire costs will not be recovered from ratepayers. ¹¹³ We find that the standard is incorporated in statute and adds further certainty and value to utility shareholders. AB 1054 does more for the regulatory and business environment in California than just creating a Wildfire Fund.

We agree with Cal Advocates and A-3 CC that Liberty's proposal for wildfire risk premium fails to take multiple factors into account that help lessen its wildfire risk. Cal Advocates states that Liberty is the subsidiary of a much larger corporation, it has renewed its wildfire insurance coverage, and that

¹¹¹ D.19-12-056, at 37.

¹¹² *Id*.

¹¹³ See A-3 CC Opening Brief, at 16.

Liberty has a wildfire mitigation plan in place. ¹¹⁴ We agree with A-3 CC that Liberty fails to recognize the apparent risk differences between a large utility with the extensive generation, transmission, and distribution facilities in populated areas and that of a rural utility with primarily distribution facilities serving a significantly less populated area. ¹¹⁵ Liberty's footprint in terms of miles of transmission and distribution lines it maintains for service compared to the two large utilities it shares borders with, namely PG&E and Southern California Edison, is less than one percent. ¹¹⁶ We also see merit in A-3 CC's argument that Liberty's equity comes from its parent, Algonquin Power and Utilities Corp, of which Liberty is a small part of and any financial risk to Algonquin's shareholders related to potential wildfires in Liberty's service area is less than the risk faced by PG&E shareholders for whom 100% of their assets and revenues exist in California. ¹¹⁷

A-3 CC correctly notes that Liberty's Wildfire Mitigation Plan lists a variety of measures that Liberty has taken and will take to reduce the risk of utility-related wildfires, including capital investment projects and more aggressive vegetation management. In this Decision, we review and approve construction and cost recovery of capital projects deemed critical and necessary infrastructure. These projects are also identified in Liberty's Wildfire Mitigation Plan and will help lower the risk due to wildfires. By approving construction

¹¹⁴ See Cal Advocates Opening Brief, at 3.

¹¹⁵ See A-3 CC -03, Surrebuttal Testimony, at 4, line 25-28, at 5, line 1-2.

¹¹⁶ Percentage derived from Exhibit A-3 CC - 03, Surrebuttal Testimony, at 6, line 15-19.

 $^{^{117}\ \}textit{See}\ A-3\ \text{CC}\ \text{-}03$, Surrebuttal Testimony, at 6, line 6-12.

¹¹⁸ See A-3 CC Opening Brief, at 22-23.

¹¹⁹ See A-3 CC-04, Liberty's Wildfire Mitigation Plan, at 21

and cost recovery of capital projects, such as 625/650 Phase 2, reconductoring - Tahoe City 7300, Topaz Line 1261, and multiple Distribution Replacement Projects, we are facilitating Liberty to lower any wildfire risk, while also allowing earning a return on these investments. Liberty acknowledges that the purpose of the Wildfire Mitigation Plan is to mitigate potential ignitions and lessen the impacts should a fire occur.¹²⁰

For the reasons stated above, we do not find Liberty's request for a wildfire risk premium of 430 basis points just and reasonable.

In our review of the ROE, our focus is on the *effects* of the "results" regardless of the methodology. In the final analysis, it is the application of informed judgment, not the precision of financial models, which is the key to selecting a specific ROE estimate. We affirmed this view in D.89-10-031, noting that it is apparent that all these models have flaws, and as we have routinely stated in past decisions, the models should not be used rigidly or as definitive proxies for the determination of the investor-required ROE. Consistent with that skepticism, we found no reason to adopt the financial modeling of any one party. The models are helpful as rough gauges of the realm of reasonableness.

The United States Supreme Court has established the legal standard for setting the fair rate of return in the <u>Bluefield</u> and <u>Hope</u> cases. The Commission's responsibility in evaluating the ROE is to set it within the range of reasonableness and at a level that allows the utility to attract investments. Based on the quantitative analysis of the parties, we adopt a just and reasonable range for ROE of 8.62 percent to 10.3 percent. We conclude it is just and fair to set the

¹²⁰ See Liberty-11, COC Rebuttal Testimony, at 12, line 11-13.

ROE at the upper end of the range of reasonableness. We approve a 10 percent ROE for Liberty.

This Decision authorizes an ROE of 10 percent, and a WACC of 7.63 percent, which will allow Liberty to earn a just and reasonable return on its investments.

3.4. Operating and Maintenance (O&M), Customer Accounts, And Administrative and General (A&G) Expenses

We authorize Liberty \$19.6 million in 2019 O&M and A&G expenses.

Liberty forecasts \$21.673 million in O&M and A&G expenses for 2019, \$22.165 million for 2020, and \$22.670 million for 2021. ¹²¹ Costs in this category consist of the following: Other Production (which includes O&M associated with the Luning Solar Plant), Distribution, Customer Care, and Administrative & General Expenses. ¹²²

To forecast 2019 O&M and A&G expenses, Liberty used cost trends based on the last 18 months of actual history (2017 through mid-2018) to establish its 2019 forecast, which includes normal inflation with exceptions for vegetation management and customer communication. Liberty has not explained what is normal inflation.

Cal Advocates recommends \$20,302,312 in O&M and A&G expenses for 2019.¹²⁴ In its forecasting methodology, Cal Advocates adopted 2018 actual recorded costs for each FERC account for Liberty's 2019 O&M and A&G

¹²¹ Liberty-10, at 17, line 3-7.

¹²² Liberty-03, at 1, lines 5-7.

¹²³ Cal Advocates -04, at 5, line 2-5.

¹²⁴ Cal Advocates -04, at 5, line 22.

expenses.¹²⁵ Cal Advocates states that actual costs recorded of the most recent year, 2018, are a better reflection for the test year 2019.¹²⁶

The table summarizes historical O&M and A&G expenses (2013-2018), Liberty's 2019 forecasts, and Cal Advocates' recommended (Actual Costs in 2018) amount¹²⁷:

							Liberty
Units (000s)	Actual	Actual	Actual	Actual	Actual	Actual	Forecast
Expense	2013	2014	2015	2016	2017	2018	2019
Other Power							
Generation	\$52	\$57	\$61	\$44	\$638	\$780	\$718
Distribution							
Expense	\$4,394	\$4,984	\$4,587	\$4,609	\$6,916	\$5,255	\$5,697
Customer Care							
Accounts	\$2,940	\$2,533	\$2,988	\$3,157	\$3,031	\$3,176	\$3,431
Administrative							
& General							
Expense	\$7,365	\$8,118	\$9,090	\$9,863	\$10,699	\$11,092	\$11,827
Total	\$14,751	\$15,692	\$16,726	\$17,673	\$21,284	\$20,303	\$21,673

We do not find either Liberty or Cal Advocates' forecasting approach reasonable and acceptable.

Cal Advocates' sole reliance on the 2018 data would have been appropriate, assuming no expected change in the maintenance cost or sales element. Since Liberty is proposing new capital projects in 2019, Cal Advocates could have considered an impact on associated O&M and A&G expenses. We also expect a change in activity level and market conditions, and Cal Advocates did not capture either in its forecast. It would be appropriate to use the latest observation, assuming no expected change in future operating expenses.

¹²⁵ Cal Advocates-04, at 5, line 8-13.

¹²⁶ *Id*.

¹²⁷ Cal Advocates-04, at 3.

Cal Advocates does not provide any supporting information on why they expect that Liberty's future costs and wages to remain constant over the Test Year.

While Liberty attempts to use a sample of 18-month data and trend it, we do not approve its methodology either, because we observe an inherent bias to forecast inflated costs with this dataset. Liberty has cherry-picked its historical data for trend analysis by limiting the dataset to only 18-months (2017-mid 2018). By trending a limited dataset, Liberty is assuming that costs will move in one direction: upward. A trend analysis is reliable if its observations use several years. Analysts prefer three to five years of historical datapoints as a reasonable choice for a "best-fit" modeling approach in forecasting future trends. We also observe an anomaly in Liberty's 2019 cost forecasts for the following cost categories under the Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts (USOA) or FERC Accounts:

Customer Care O&M Expenses (in Thousands) 128

		Actual	Liberty's Forecast		ast
FERC Acct	Expense	2017	2019	2020	2021
902	Meter Reading Expense	\$298	\$354	\$362	\$371
905	Misc. Customer Accounts	\$0	\$91	\$93	\$95
907	Supervision	\$4	\$159	\$163	\$166
908	Customer Assistance	\$575	\$902	\$923	\$944
	Total	\$877	\$1,506	\$1,541	\$1,576

Based on the evidence in the record, we do not find any supporting data to increase the O&M cost estimates for 2019 by the amounts shown in the table. Meter Reading Expense should decrease because meter reading will be automated. Liberty requested AMI deployments¹²⁹; therefore, labor costs,

¹²⁸ Liberty-03, page 5

¹²⁹ Liberty-10, at 15, line 7-11.

materials used, and expenses incurred in reading customer meters and determining consumption should decrease due to automated systems. Regarding Accounts 905, 907, and 908¹³⁰, which are costs associated with customer service, we expected lower cost estimates due to revised lower sales forecasts.¹³¹ Liberty has not explained why its labor costs are increasing despite a decrease in its customer accounts.¹³²

We find Liberty's historical cost components display an inconsistent pattern; therefore, the best approach is to use a multi-year (*e.g.*, three-to-five-years) average rather than assigning a high weight to the latest observation or a trend analysis based on limited data. Therefore, using the information in the record, we adopt a three-year average cost methodology for O&M and A&G. The results will be further adjusted using an escalation factor, as explained below.

On A&G expenses, Cal Advocates proposes to disallow the \$506,505 amount for executive compensation from FERC Account 920 and recommends instead establishing a memorandum account to record expenses associated with FERC Code 69-5010-9201 according to Commission Resolution E-4963. We agree with Cal Advocates. The Commission's direction is clear on how executive compensation can be recovered from ratepayers. We order Liberty to establish the memorandum account and remove these costs from its forecast.

¹³⁰ https://www.ferc.gov/whats-new/comm-meet/101906/M-1.pdf

¹³¹ Liberty-10, at 39, line 21-22.

¹³² Liberty-10, at 18, line 3-4

¹³³ Cal Advocates -04, at 6, line 13-15 and at 7, line 1.

With regards to 2020 and 2021 expenses, Liberty escalated its 2019 forecast using an annual escalation rate of 2.35 percent.¹³⁴ Liberty's escalation rate is the 23-year average yearly change in the CPI – West Region (not seasonally adjusted) from 1994-2017.¹³⁵

A-3 CC disagrees with Liberty's use of the escalation factor of 2.35 percent.¹³⁶ It does not disagree with Liberty's underlying data, and neither does it recommend an alternative measure of inflation as an escalation rate. A-3 CC argues that Liberty's use of the twenty-four-year average of CPI-West (CPI-W) includes anomalies that skew the results, and the ensuing CPI does not reflect the current market conditions.¹³⁷ It further adds that Liberty's data shows, four of the last five years of CPI-West inflation rates presented have been well below the proposed 2.35 percent inflation rate.¹³⁸ Using Liberty's data, A-3 CC suggests an escalation factor of 1.86 percent based on the five-year average.¹³⁹

A-3 CC contends that while Liberty has used shorter historical data to forecast future years, it is relying on a much longer historical period to forecast inflation for the next two to three years. A-3 CC further states that as with all other forecasts, the most recent history of price escalation is a better predictor of likely escalation for the next two to three years. 141

¹³⁴ Liberty-04, at 3, line 17-19, at 4, line 1-2; at 6, line 2-6, at 7, line 2-6.

¹³⁵ A-3CC-01, Attachment A-3 CC -(2), at 5

¹³⁶ A-3 CC-01, at 8, line 11-17.

¹³⁷ A-3 CC-01, at 8-9

¹³⁸ A-3 CC-01, at 9, line 2-4.

¹³⁹ A-3 CC-01, at 9, line 10-18.

¹⁴⁰ A-3 CC Opening Brief, at 8-9.

¹⁴¹ *Id*.

We agree with A-3 CC and find it reasonable to use an average escalation factor based on the more recent five years, which is closer to the current market conditions. This Decision adopts an escalation factor of 1.86 percent to calculate 2020 and 2021 O&M and A&G expenses.

Based on our review and dispositions on the issues above, we authorize the following adjustments to Liberty's O&M and A&G expenses:

- a. Adopt an escalation factor of 1.86 percent for 2019, 2020, and 2021 costs.
- b. Adopt a three-year (2016-2018) average methodology to calculate O&M and A&G expenses.
- c. Remove costs associated with Account 920 in its 2019 cost forecast and establish a memorandum account.
- d. Liberty should accordingly adjust its 2020 and 2021 O&M and A&G expenses using 1.86 percent as its escalation factor.

We approve the following 2019 O&M and A&G cost estimates:

Units (000s)	Actual	Actual	Actual	Liberty Forecast	CPUC Approved
Expense	2016	2017	2018	2019	
Other Power Generation	\$44	\$638	\$780	\$718	\$496
Distribution Expense	\$4,609	\$6,916	\$5,255	\$5,697	\$5,697
Customer Care Accounts	\$3,157	\$3,031	\$3,176	\$3,431	\$3,179
Administrative & General Expense	\$9,863	\$10,699	\$11,092	\$11,827	\$10,232
Total	\$17,673	\$21,284	\$20,303	\$21,673	\$19,605

For future rate cases, we encourage Liberty to have a better forecasting approach for its O&M and A&G Costs. It should use a minimum of three to five years of data for average historical methodology. If Liberty wants to use trend analysis, then it should rely on a minimum of five years of historical data.

Additionally, if Liberty's FERC Account cost estimates increase by 5 percent, then Liberty shall explain in its Application the basis of the increase in each of its accounts.

3.5. Vegetation Management Program

We approve Liberty's annual vegetation management budget of \$3.98 million with a cost cap of \$3.06 million to be included in rates each year and the balance amount of \$915,705 to be tracked in a one-way memorandum account and recovered via a Tier 2 Advice Letter.

Liberty is requesting \$3.984 million per year in its vegetation management program. Liberty engaged Western Environmental Consultants Inc. ("WECI") to conduct a comprehensive review of Liberty's vegetation management program and identify an optimum vegetation maintenance cycle strategy and other improvement opportunities. Liberty adds that WECI's review concluded that the previously authorized funding of \$2.523 million per year is insufficient as it results in an approximately 7.3-year maintenance cycle. Liberty is proposing to move to a three-year cycle of vegetation management from the 7.3-year cycle of completion of maintenance it has followed in its service territory.

Cal Advocates supports Liberty's mission to improve its vegetation management program, but it differs on the cost estimates and the methodology to recover the costs.¹⁴⁶ Cal Advocates states that the Commission should allow

¹⁴² Liberty-04, at 4, line 16-18.

¹⁴³ Liberty-04, at 3, line 9-15.

¹⁴⁴ Libertt-04, at 4, line 2-3.

¹⁴⁵ Liberty-04, at 4, line 16-18.

¹⁴⁶ Cal Advocates-04, at 8-9.

\$3,068,295 for 2019 revenue requirement since that is the highest amount that Liberty has ever spent on vegetation management in one year. Cal Advocates recommends capping the requested costs at \$3.98 million, which would entail including \$3,068,295 in 2019 revenue requirement and allowing Liberty to record the remaining costs in a memorandum account for cost recovery.

Liberty rejects Cal Advocates' recommendation and states that it is improper to provide the utility with rates generating \$3.068 million but base the refunds to customers in the memorandum account on \$3.984 million. We do not agree with Liberty's reasoning. Cal Advocates' recommendation is to allow only \$915,705 to be monitored through the memorandum account while including \$3.068 million in 2019 rates. We find Cal Advocates' recommendation reasonable because given the historical spend if Liberty does not spend its entire projected vegetation management budget, ratepayers are protected from having to pay for funds not used by the utility. It also allows Liberty an opportunity to recover its full, requested vegetation management budget, with an added protection for ratepayers. 151

A-3 CC does not oppose Liberty's vegetation management request in this proceeding. It states that, like other mitigation proposals, improved vegetation management should significantly reduce Liberty's wildfire risk.

We approve Liberty's annual vegetation management budget of \$3.98 million with a cost cap of \$3.06 million to be included in rates each year and the

¹⁴⁷ Cal Advocates Opening Brief, at 15.

¹⁴⁸ Id.

¹⁴⁹ Liberty-10, at 24, line 16-18.

¹⁵⁰ Cal Advocates Opening Brief, at 15.

¹⁵¹ *Id*.

balance amount of \$915,705 to be tracked in a one-way memorandum account and recovered via a Tier 2 Advice Letter.

3.6. Public Purpose Program

Liberty is seeking cost recovery for Energy Efficiency (EE), Solar Incentive Program (SIP), and Transportation Electrification (TE) for Test Year (TY) 2019.

3.6.1. Energy Efficiency

The Commission authorizes Liberty \$471,000 per year in EE funding.

Liberty requests \$791,000 annually for EE programs, which is a \$320,000 increase from authorized expenses. 152

Cal Advocates recommends that the Commission authorize \$471,000 for TY 2019, which is the same amount that was authorized in D.16-12-024. Same amount that was authorized in D

Liberty rejects Cal Advocates' proposal and states that \$471,000 was reasonable years ago when the Commission approved it in Liberty's 2016 GRC for EE.¹⁵⁶ It adds that Liberty is mainly requesting additional funding for three EE programs: Residential Energy Audits, Commercial Incentive Program, and the Public Schools Incentive Program.¹⁵⁷

¹⁵² Liberty-05, at 1, line 20-21.

¹⁵³ Cal Advocates-06, at 1, line 26-27.

¹⁵⁴ Cal Advocates-06, at 4, line 1-13.

¹⁵⁵ *Id*.

¹⁵⁶ Liberty-10, at 25, line 22-24.

¹⁵⁷ Liberty-10, at 26, line 6-8.

We do not find evidence in Liberty's filing that it has considered the current and future potential of energy efficiency savings in developing its cost estimates. We agree with Cal Advocates, there is no reasonable basis, or showing of need, to expand Liberty's program by 68 percent. Per the California Energy Commission's directive, savings from many lighting measures transitioned to code or standard practice, which means some of the EE measures for lighting are no longer or will become ineligible for rebates. Liberty's forecasted costs do not reflect the impact of the reduced potential of savings from some of these lighting measures. Also, since filing the Application, the Commission has adopted EE potential and goals for 2020-2030, which excludes the secondary refrigerator recycling program. Reduction in savings and exclusion of other measures would lower the budgeted annual EE funds.

Based on the Commission's guidance on future EE potential and goals, we expect less funding for some program areas presented by Liberty. We find it reasonable to maintain the currently approved EE budget, as it will allow Liberty to reduce its spending on programs that are no longer eligible for rebates while directing funds on programs with potential savings. The amount we are authorizing is also closer to the historical average spend over the past five years. We approve \$471,000 per year as Liberty's EE fund.

3.6.2. Solar Initiative Program

This Decision authorizes Liberty to recover \$420,000 for SIP programs in its 2019 revenue requirement.

¹⁵⁸ Cal Advocates Opening Brief, at 17.

¹⁵⁹ See Commission's Resolution E-4952 updating the baseline for non-residential lighting measures to Light Emitting Diodes (LEDs), the effect of which is to significantly reduce savings potential.

Liberty proposes \$1,207,000 for Test Year 2019 SIP Program.¹⁶⁰

Cal Advocates state that this is a 225 percent increase above Liberty's previously authorized \$371,000 2018 SIP budget and 188 percent above recorded 2018 expense of \$419,515.\(^{161}\) In its recommendation, Cal Advocates wants the Commission to authorize \$420,000 for Test Year 2019, which is 13 percent above Liberty's Commission authorized budget of \$371,000.\(^{162}\) It states that Liberty will be able to continue and expand its SIP.\(^{163}\)

Liberty opposes Cal Advocates' recommendation. It states that Liberty proposes an expansion of the SIP to include all customer classes with varying levels of incentive limits, and this expansion will allow school districts greater capacity to participate in the program and enable the schools to install solar energy systems.¹⁶⁴

However, we do not find supporting information with details on how Liberty will rapidly deploy these solar units and utilize a budget, which is 225 percent higher than its current budget. We encourage Liberty's continued efforts in expanding the program, but at a pace that is well documented and not burdensome to the ratepayers. Cal Advocates has duly compared the forecasted amount with the historical average, and we find their request to allow an increased budget of \$420,000 reasonable. The budget proposed by Cal Advocates is 13 percent higher than Liberty's current budget, which will enable Liberty to continue expanding the program beyond its current scope. We agree with Cal

¹⁶⁰ Liberty-05, at 5, Table I-2.

¹⁶¹ Cal Advocates-06, at 6, line 5-9.

¹⁶² Cal Advocates-06, at 6, line 13-15.

¹⁶³ *Id*.

¹⁶⁴ Liberty-10, at 27, line 20-23.

Advocates and see merit in expanding the program to school districts that can use the program funds to install solar energy systems. This Decision authorizes Liberty \$420,000 for the 2019 revenue requirement.

3.6.3. Transportation Electrification (TE) Operating Expenses

We authorize Liberty to recover \$517,000 in 2019 for operating expenses authorized for TE under D.18-09-034.

For TE, Liberty forecasts providing rebates to 1,000 residential customers (at \$1,500 per rebate) and 100 small commercial customers (at \$2,500 per rebate). It also requests recovering administrative costs of \$150,000 and costs for implementing the Customer Online Resource of \$85,000.165 Liberty is including costs pursuant to funds approved in D.18-09-034 in this GRC in its revenue requirement forecast.166 In all, Liberty is requesting \$1.03 million in a memorandum account as part of its 2019 revenue requirement.

Cal Advocates notes that as of mid-June 2019, Liberty had not yet initiated the TE program and has proposed no increase beyond the Decision's authorized amount of approved costs for the program. Cal Advocates does not oppose Liberty's request to include \$1,035,000 as operating revenues associated with the TE program for 2019 under a memorandum account.

Since Liberty had not started the program as of mid-June 2019, we find it reasonable to decrease its request for operating expenses by half for inclusion in the 2019 revenue requirement. While we approve the inclusion of the memorandum account as a placeholder to account for expenses related to this

¹⁶⁵ Liberty-05, at 5, line 7-18.

¹⁶⁶ Liberty-05, at 5, line 7-18.

¹⁶⁷ Cal Advocates-07, at 7, line 6-9.

¹⁶⁸ Cal Advocates-06, at 9, line 1-8.

program in the 2019 revenue requirement, we expect Liberty to establish a balancing account to track and recover expenses going forward.

In this Decision, we are approving \$517,000 in the TE memorandum account for inclusion as part of the 2019 revenue requirement calculation. Within 30 days of the adoption of this Decision, Liberty shall file a Tier 2 Advice Letter seeking approval to establish a TE-specific Balancing Account to track and record expenses associated with the TE programs authorized in D.18-09-034. The Advice Letter shall also provide a detailed breakdown of Liberty's year-to-date capital and O&M expenses; year-to-date revenues earned due to over-collections, plans to implement the program for 2020-2021; and projected O&M costs for each year.

In summary, this Decision authorizes \$517,000 as operating expenses for recovery in Liberty's proposed memorandum account for the 2019 revenue requirement. Within 30 days of the adoption of this Decision, Liberty shall file a Tier 2 Advice Letter seeking approval to establish a TE-specific Balancing Account.

3.7. Revenue Requirement, Sales, Revenue, and Customer Forecast

3.7.1. Contributions in Aid of Construction ("CIAC")

We authorize Liberty to adjust its plant forecast to include \$0.352 million CIAC credit offsets for new business. The adjustment is based on a three-year average of 2015-2017 recorded CIAC balances and will offset plant additions in 2019-2021.

Cal Advocates highlights that Liberty's ratebase should be reduced for 2019 CIAC forecast of (\$10,970,000) with an adjustment for related tax gross-up

of \$2.050 million.¹⁶⁹ Cal Advocates states, "Liberty's RO model shows a history of positive CIAC amounts, and CIAC amounts should be subtracted from rate base and if Liberty's proposal not to forecast any CIAC for TY 2019 is adopted, investors will receive compensation for the plant that was contributed by customers."¹⁷⁰

Liberty acknowledges that CIAC should be included as a credit to rate base, but it also corrects Cal Advocates' calculations, which incorrectly referenced the wrong data.¹⁷¹ Liberty states that it will offset plant additions in 2019-2021 to include CIAC credit offsets for new business for \$0.352 million, based on a three-year average of 2015-2017 recorded CIAC balances, which is consistent with 18 Code of Federal Regulation, Part 201.¹⁷²

We find Liberty's adjustment reasonable and allow it to offset the plant additions with a credit amount of \$352,777.

3.7.2. Materials and Supplies ("M&S") Forecast adjusted to Move Fuel Inventory Costs to ECAC

We authorize Liberty to reduce its M&S forecast by \$30,000 and allow it to include the fuel inventory cost in its Energy Cost Adjustment Clause (ECAC) calculations.

Cal Advocates recommends a \$30,000 reduction to Liberty's M&S forecast to exclude fuel inventory. It states that under longstanding Commission precedent, fuel inventory is not a rate base component, and if Liberty seeks compensation for the carrying costs of its fuel inventory, it should seek

¹⁶⁹ Cal Advocates-09, at 4-5.

¹⁷⁰ *Id*.

¹⁷¹ Liberty-10, at 29-30.

¹⁷² *Id*.

short-term interest for its fuel inventory balance(s) in the proceeding.¹⁷³ We agree with Cal Advocates.

Liberty agrees with Cal Advocates' recommendation to exclude fuel inventory from the M&S forecast.¹⁷⁴ However, Liberty does not explain which ECAC filing, present, or future, will it move these costs in to. Neither does it indicate that its Results of Operation Model in this Proceeding will be modified for this adjustment. We find it reasonable to record this adjustment within this proceeding for the simplicity of recordkeeping.

We authorize Liberty to adjust the M&S and ECAC forecast accordingly.

3.7.3. Construction Material Used in Ratebase

We require Liberty to exclude the cost of all construction-related materials and supplies from the calculation of its rate base. In the future, Liberty must record the dollar amounts under Account 154 for the Materials and Inventory used for capital projects and operations and maintenance.

A-3 CC has concerns about Liberty's inclusion of the cost of materials and supplies related to construction projects in the rate base.¹⁷⁵ It states that unlike materials and supplies that are maintained for repairs, materials, and supplies for construction projects provide no benefits to ratepayers until the projects are completed. A-3 CC also states that a fundamental regulatory principle is that investments are not added to rate base until they are "used and useful" in providing service to customers.¹⁷⁶ While A-3 CC has raised a concern, it does not

¹⁷³ Cal Advocates-09, at 6.

¹⁷⁴ Liberty-10, at 30, line 1-3.

¹⁷⁵ A-3 CC-01, page 13-14.

¹⁷⁶ A-3 CC Opening Brief, page 4.

have recommendations on how to adjust for the component as it did not receive the necessary data response.¹⁷⁷

The purpose of FERC Account 154 is to designate materials and supplies inventory as construction or O&M, which provides the Commission with information about how the materials and supplies inventory will be used and which has significant ratemaking implications. Liberty argues against excluding from ratebase the inventory of construction-related materials and supplies. Liberty states that materials and supplies inventory balance is maintained for new plant construction and *operating repairs* [emphasis added] required to meet planned and emergency events in Liberty's service territory. Liberty states that construction-related materials and supplies are purchased and remain in inventory until the field requires the items, whereby crediting the FERC Account 154 and debiting the construction job order in Construction Work in Progress Account 107.179

We find that materials and supplies inventory used for construction projects is removed from FERC Account 154 and capitalized in Account 107, Construction Work in Progress-Electric, and materials and supplies inventory that is used for O&M is expensed. Liberty admits that it maintains an inventory balance for new plant construction and *operating repairs* [emphasis added] required to meet planned and emergency events. However, Liberty fails to identify the portion of its materials and supplies inventory designated as

¹⁷⁷ A-3 CC- 01, Page 14, line 1-3.

¹⁷⁸ Liberty-10, at 31, line 10-11.

¹⁷⁹ Liberty-10, at 31.

¹⁸⁰ https://www.ferc.gov/CalendarFiles/20180423175734-ER17-1553-001.pdf

¹⁸¹ Liberty Reply Brief, at 9-10.

construction-related and operations. We find it unreasonable for Liberty to capitalize its entire materials and supplies inventory.

We find that inclusion of all materials and supplies as construction related would inflate the rate base. A-3 CC correctly notes that based on the record, Liberty would have an unfettered ability to increase its rate base merely by designating inventory and equipment as materials and supplies for construction projects, whether are not the equipment was needed for any projects that are actually planned and that would benefit ratepayers.¹⁸²

We find Liberty's claim unfounded that Commission's Standard Practice U-16 does not segregate and remove capital inventory from materials and supplies balances. A-3 CC correctly notes that per Standard Practice U-16 cash held for construction is not considered as a working cash component for ratebase. It was evident at the evidentiary hearings that Liberty's witness was not familiar with Standard Practice U-16. We agree with A-3 CC's assertion that Standard Practice U-16 contradicts Liberty's position on the treatment of construction-related materials and supplies.

We require Liberty to exclude the cost of all construction-related materials and supplies from the calculation of its rate base. In the future, Liberty must record the dollar amounts under Account 154 of the Materials and Inventory used for capital projects and operations and maintenance.

¹⁸² A-3 CC Opening Brief, at 5.

¹⁸³ Liberty-10, at 31, line 22-24.

¹⁸⁴ A-3 CC Opening Brief, at 5.

¹⁸⁵ Reporter's Transcript (RT) Vol. 4, at 130, l. 22 through p. 131, l. 17 (Liberty/Campbell)

¹⁸⁶ *Id*.

3.7.4. Ratebase - Working Cash

This Decision authorizes (\$7,829,000) of Working Cash in ratebase as part of the 2019 revenue requirement.

Liberty forecasts \$482,000 in cash working capital and \$935,000 in prepayments resulting in a total working cash amount of \$1.42 million for inclusion in the ratebase as part of the 2019 revenue requirement. Using a lead-lag study, Liberty calculates a revenue lag, indicating the lag time between the provision of service to customers and the receipt of the corresponding revenues. Liberty's study methodology is consistent with the guidance in the Commission's Standard Practice U-16.

Cal Advocates does not oppose Liberty's lead-lag study but proposes to reduce Liberty's work cash for injuries and damages forecast by \$123,000, the property tax forecast by \$456,000, and accrued vacation and liabilities forecast by \$10,770,000.189 Specifically, Cal Advocates proposes two categories of adjustments (a) removing Injuries & Damages and Property Taxes from Prepayments, which it states are double-counted by way of the lead-lag study; and (b) deducting accrued vacation and liabilities, which it says represents sources of working cash not supplied by investors, per Standard Practice U- 16.190 These adjustments result in a negative working cash amount of \$9.92 million.

Liberty states that Cal Advocates' adjustments are unrealistic and punishes Liberty shareholders for funding the cash requirements of running the business

¹⁸⁷ Liberty-06, at 9, line 21-23.

¹⁸⁸ Id.

¹⁸⁹ Cal Advocates-09, at 12, line 2-6.

¹⁹⁰ *Id*.

until receiving revenues.¹⁹¹ Liberty argues that many of its accrued liabilities, such as purchased power, various taxes, non-recurring payment of Luning Solar Plant, are already included in Liberty's lead-lag study. Therefore, Liberty believes that its working cash forecast should not consist of these liabilities.¹⁹²

Liberty has already accounted for Injuries & Damages and Property Taxes in its lead-lag study for cash requirement, and therefore it is double counting these costs by also including them in Prepayments. ¹⁹³ We find Liberty's proposal to receive working cash compensation for the same items, once as operational cash (Prepayments) and, then, as expenses in its lead-lag study, as double-counting. Liberty provides no factual information explaining why it is reasonable to double count these items. It is reasonable and prudent to adjust the effect of double counting, consistent with Standard Practice U-16 guidance on the operational cash requirement. ¹⁹⁴ We, therefore, accept Cal Advocates adjustments to remove \$123,000 for Injuries and Damages and \$456,000 for Property Taxes.

Cal Advocates proposes \$367,000 for prepayments and we find that reasonable. 195

Cal Advocates further argues that Liberty's proposal overestimates the forecasted working cash allowance for TY 2019 because it fails to deduct working cash that is not supplied by investors.¹⁹⁶ Cal Advocates adds that sources of

¹⁹¹ Liberty-10, at 32, line 11-12.

¹⁹² Liberty-10, at 32, line 14-17.

¹⁹³ Liberty-14, Liberty Workpapers, Cash Working Cash Tab.

¹⁹⁴ Standard Practice U-16, at 1-7, Chapter 3, Section 19.

¹⁹⁵ Cal Advicates-09, at 9.

¹⁹⁶ Cal Advocates-09, at 12-13.

working capital that are available to a utility, yet not provided by investors, are a critical component of the working cash allowance, such as employee withholdings, current liabilities, and accrued liabilities and should be deducted from working cash allowance.¹⁹⁷ Based on the information in Liberty's data responses, Cal Advocates projects (via linear regression) Test Year 2019 accrued vacation and accrued liabilities and proposes deducting \$753,000 and \$10,017,000, respectively, for these components.¹⁹⁸

Liberty claims to have conducted a detailed lead-lag study and argues that its working cash study should not be subject to other accounting adjustments, such as deducting accrued vacation and accrued liabilities totaling \$11 million.¹⁹⁹

We disagree with Liberty. We find that Liberty has not followed the guidance provided under the Standard Practice U-16 manual for calculating the working cash allowance. It chose to calculate the working cash allowance using the detailed basis approach but then cherry-picked the adjustments.

Under the detailed basis approach, Standard Practice U-16 requires deductions from current assets of certain current liabilities, which represent monies provided from sources other than the investors for the operation of the utility.²⁰⁰ Standard Practice U-16 also states that monies already derived through rates to offset a future liability which the company has not incurred, monies received from customers for the procurement of services, and amounts withheld from employees are intermingled in the cash balances or invested in the plant

¹⁹⁷ *Id*.

¹⁹⁸ *Id*.

¹⁹⁹ Liberty-10, at 32, line 21-24.

²⁰⁰ Standard Practice U-16, at I-8, Section 21.

accounts.²⁰¹ Therefore, by not excluding these amounts, we are allowing investors compensation for funds that they have not supplied.

We agree with Cal Advocates that the utility's accrued vacation balance and accrued liabilities are a source of working cash during the period between its accrual in rates and its payments.²⁰² Instead of accepting Cal Advocates' linear regression modeling results, we rely on the average of the past five years (2013-2018) of accrued vacations and accrued liabilities amount to make the appropriate deductions from the operational cash requirements.

Years	Accrued Liabilities	Accrued Vacation
	(\$ in Tho	ousands)
2013	\$6,830	\$475
2014	\$7,932	\$564
2015	\$6,908	\$518
2016	\$7,575	\$690
2017	\$8,165	\$619
2018	\$11,074	\$718
Average	\$8,081	\$597

This Decision orders Liberty to deduct \$8,678,000 from its operational cash requirements.

In summary, we authorize Liberty's lead-lag working cash requirement. We order Liberty to adjust the Prepayments for double counting of Injuries & Damages and Property Taxes and to comply with the Standard Practice U-16 guidance by deducting accrued vacations and accrued liabilities from operational cash requirements. Based on our review of the evidence, we order Liberty to reduce its Working Cash by \$7,829,000 for inclusion in rate base for 2019 revenue requirement.

	Authorized Working
Accounts	Cash (\$ in Thousands)

²⁰¹ Id.

²⁰² Cal Advocates-09, at 13.

Lead-Lag Working Cash Requirement	\$482
Prepayments	\$367
Accrued Vacation	(\$597)
Accrued Liabilities	(\$8,081)
Authorized Working Cash	(\$7,829)

3.7.5. Effective Federal Income Tax Rate

This Decision requires Liberty to use the statutory federal income tax rate of 21 percent and use the prior year's California Corporate Franchise Tax (CCFT) ratemaking amount for the flow-through treatment for the CCFT deductions in setting rates.

A-3 CC and Cal Advocates assert that Liberty should use an effective federal income tax rate of 19.14 percent, instead of 21 percent. A-3 CC states that Liberty's proposed 21 percent federal income tax rate fails to account for the deductibility of the CCFT from Liberty's federal taxable income.²⁰³ Cal Advocates also used an effective federal tax rate and California statutory tax rate in its calculations, thus lowering the applicable federal income tax rate to 19.14 percent.²⁰⁴

Liberty does not oppose A-3 CC and Cal Advocates' recommendation to lower its federal income tax rate to 19.14 percent.²⁰⁵

Federal law allows a deduction for state income taxes paid, and in California, this is the CCFT deduction. Lowering the statutory federal income tax rate in this GRC cycle would amount to CCFT deductions in the current ratemaking process. The proposal to use a lower effective federal tax rate is problematic because federal tax law and Internal Revenue Service regulations

²⁰³ A-3 CC-01, at 4-5.

²⁰⁴ Cal Advocates-02, at 9-10.

²⁰⁵ Liberty-10, at 13, line 10-12.

mandate that a given year's CCFT expense is not available as a deduction for federal income tax until the following year. In D.89-11-058, the Commission concluded that ratemaking should reflect the value of CCFT deductions, and it should be the prior years' Commission-adopted CCFT, not the current year CCFT.²⁰⁶ In adopting this flow-through treatment of the CCFT deductions, the Commission ordered that in the future, all results of operations for all utilities shall reflect the flow-through treatment for the CCFT deduction in computing federal income tax expense.²⁰⁷

Therefore, we deny A-3 CC and Cal Advocates' recommendation to use an effective rate to calculate federal income tax expense.

This Decision orders Liberty to use the statutory federal income tax rate of 21 percent and use the prior year's CCFT ratemaking amount for the flow-through treatment for the CCFT deductions in setting rates.

3.7.6. Escalating Ratebase

Liberty's request to escalate its ratebase with a factor of 2.35 percent escalation rate is denied.

We agree with A-3 CC that Liberty failed to justify its use of a 3 percent or its revised 2.35 percent escalation rate, or any escalation rate, to estimate its test-year account balances for uncollectibles, cash working capital, fuel inventory, materials and supplies, and prepayments.²⁰⁸ Merely stating how it derived the escalation factor is not evidence to support escalating the ratebase items. Liberty has not met its burden of proof to support ratebase escalation.

²⁰⁶ D.89-11-058, COL 1.

²⁰⁷ D.89-11-058, OP 4.

²⁰⁸ A-3 CC-01, at 6-7.

Liberty shall not escalate various components of its ratebase as it has requested.

3.7.7. Excess Accumulated Deferred Income Taxes (EADIT)

This Decision adopts Liberty's treatment of the EADIT forecast and orders it to report any changes in the Internal Revenue Service (IRS) guidance that could impact the accounting in the Tax Memorandum Account and "materially affect" with an increase or decrease of more than \$150,000 the revenues. .

When the Tax Cuts and Jobs Act of 2017 reduced the Federal Corporate Income Tax Rate from 35 percent to 21 percent, a collateral effect was that less deferred tax balance was necessary to pay future taxes. The lower tax rate resulted in Excess Accumulated Deferred Income Taxes (EADIT) eligible for return to ratepayers (since ratepayers funded the higher taxes in the past). Since the original accumulation of the deferred tax balance is the result of IRS normalization rules, those same normalization rules also govern the return of the majority of EADIT to ratepayers.

A-3 CC adjusted Liberty's EADIT by including the income tax gross-up and removing Liberty's adjustment to EADIT related to a net operating loss (NOL).²⁰⁹ Liberty opposes A-3 CC's recommendation and instead recommends the inclusion of its adjustment to EADIT for the NOL. Liberty states that the excess deferred tax asset related to the NOL carryforward is netted against the excess plant-associated deferred tax liability. The deferred tax liability, according to Liberty, is used to compute the amount of taxes deferred as a result of the use of accelerated tax depreciation that will not be payable to the

²⁰⁹ A-3 CC-01, at 10.

government due to the change in tax law.²¹⁰ Liberty asserts that its treatment of the NOL is consistent with IRS normalization requirements and that a normalization rule violation could have severe financial consequences to Liberty and its ratepayers.²¹¹

Finally, Liberty suggests that if the IRS issues regulations conflicting with its treatment of the NOL and EADIT in this GRC, Liberty can track the difference and make an adjustment through its Tax Memorandum Account. ²¹² Liberty's Tax Memorandum account was set up to record any revenue differences resulting from the income tax expenses forecasted in the general rate case (GRC) proceedings and the tax expenses incurred. ²¹³

We agree with Liberty regarding the treatment of NOLs/EADIT within the IRS normalization rules and adopt its methodology in this GRC cycle. Liberty shall comply with all IRS normalization rules. If the IRS regulations are modified, then Liberty shall track the difference in its Tax Memorandum Account for future correction to maintain compliance with IRS normalization rules. This Decision adopts Liberty's EADIT forecast methodology.

Within 30 days of the adoption of this Decision, Liberty shall inform the Commission of any changes issued by the IRS between the time of filing this Application and the issuance of this Decision that would impact its treatment of the EADIT and NOL. Liberty shall record the changes in the Tax Memorandum Account for future Commission review and approval. Consistent with Commission guidance in D.16-12-024 we expect and will require, Liberty to

²¹⁰ Liberty-10, at 35-39.

²¹¹ *Id*.

²¹² *Id*.

²¹³ D.16-12-024, OP 6.

notify the Commission of any tax-related changes, and tax-related accounting changes or any tax-related procedural changes that the IRS might have issued during the review period of this Application and that materially affect, or may materially affect, revenues, to track any revenue differences if applicable via its Tax Memorandum Account. Our reference to "materially affect" means a potential increase or decrease of \$155,000 or more in revenues.²¹⁴

3.7.8. Revised Sales Forecast

This Decision authorizes Liberty's revised Sales Forecast.

At the time of filing its Application, Liberty did not have data through 2018. Subsequently, Liberty revised its sales forecast based on the most currently available data through 2018. Liberty retains the same forecasting methodology as in its Application. Overall, the revised sales forecast is 2 percent lower in 2019, 3 percent lower in 2020, and 4 percent lower in 2021. Cal Advocates supported Liberty's forecasting methodology. 216

We find it reasonable to use the revised sales forecast and authorize Liberty to update its sales forecast. The revised estimate will be a better representation of Liberty's future system needs and costs to ratepayers. This Decision adopts the revised sales forecast.

3.7.9. Results of Operation

The Commission Authorized costs, and revenue requirement is available in the Results of Operation Model, as shown in Appendix A of this Decision. The Decision authorizes a 2019 Revenue Requirement of \$85.4 million. The overall

²¹⁴ D.16-12-024, OP 7.

²¹⁵ Liberty-10, at 39.

²¹⁶ Cal Advocates-03, at 1.

revenue requirement increases compared to the current²¹⁷ revenue requirement is 1.66 percent.

3.8. Energy Cost Adjustment Clause ("ECAC"), Greenhouse Gas ("GHG") and Climate Credit Forecast

We authorize an ECAC Billing Factor of \$30.42 per megawatt-hour.

Liberty is seeking approval of ECAC Billing Factor of \$29.64 per megawatt-hour and approval of GHG costs and revenue allowances leading up to a semiannual California climate credit of \$46.16 to residential customers and a monthly volumetric small business climate credit of \$0.00406 per kilowatt-hour.²¹⁸

Cal Advocates does not oppose Liberty's power purchase and fuel costs.²¹⁹ Cal Advocates did not comment on Liberty's GHG costs and climate credit calculations.

We approve Liberty's forecasted power purchase and fuel costs and find its reconciled cost estimates reasonable. In its rebuttal testimony, Liberty revised its sales forecast²²⁰ and agreed to move fuel costs from Materials and Supplies to the ECAC portion of the proceeding;²²¹ however, it did not review the ECAC Billing Factor considering these revisions. Upon reviewing the revised data, we modify Liberty's ECAC Billing Factor to \$30.42 per megawatt-hour. Liberty shall use this revised ECAC Billing Factor in its 2021 ECAC Proceeding to reconcile any under/over collections during 2019.

The Decision is comparing the revenue requirement increase in context to the application. The current revenue requirement at the time the application was filed was \$84 million.

²¹⁸ Liberty-07.

²¹⁹ Cal Advocates-05.

²²⁰ Liberty-10, Attachment 8

²²¹ Liberty-10, at 30-31.

Regarding GHG costs and climate credits, we approve Liberty's proposed GHG costs and revenue allowances used in calculating the climate credits. Regarding authorization for the climate credits, it is essential to note that the in D.20-06-044, Liberty's 2020 ECAC Proceeding, the Commission recognized Liberty's unauthorized climate credit payments in 2019, data errors, and reconciled fund allocations for the SOMAH program from 2016-2019. Liberty filed corrected 2019 GHG Allowance Revenues and climate credit amounts, which the Commission used as the basis for 2020 Climate Credit payouts. The Commission found it reasonable to adjust the 2020 climate credit for Liberty's gross error in 2019, other modeling errors, and the prior years' SOMAH under allocation.²²² Since D.20-06-044 has corrected Liberty's 2019 data errors, we will not do the same in this proceeding to avoid double-counting them.

Liberty can carry forward any remaining adjustments from 2019 ECAC and climate credit payments as a supplement to the 2021 ECAC Proceeding, which is due later this year.

This Decision authorizes an ECAC Billing Factor of \$30.42.

3.9. Marginal Cost of Service Study, Revenue Allocation and Rate Design

3.9.1. Marginal Cost of Service Study (Marginal Cost Study)

We accept Liberty's proposed Marginal Cost Study results for this GRC cycle. Liberty is ordered to undertake its own cost of service study for the next GRC filing and not rely on NV Energy's analysis.

²²² A.19-07-007, Proposed Decision, at 24.

Liberty uses methodologies consistent with and found in Liberty's previous GRC filings. ²²³ Liberty does not use its own actual recorded or historical system peak demand data to develop its Marginal Cost Study. The marginal cost of service study utilizes the following:

- Applying NV Energy's marginal costs of generation and transmission to seasons and time-of-use ("TOU") periods based on Liberty's system-wide demands for energy; and
- Applying NV Energy's system-wide marginal costs of energy to Liberty's seasonal and TOU specific periods.

Cal Advocates accepts Liberty's marginal cost of service study methodology.²²⁴

We disagree with Liberty's assertion that it is a "newer" distribution company and still has to rely on NV Energy for its generation, transmission, and energy services. Liberty has served customers through GRC cycles and should have collected data to update its Marginal Cost Study to reflect its system's need. In D.16-12-024, the Commission granted the settlement between Liberty and Cal Advocates. One of the settlement conditions was for Liberty to use its best efforts to propose an alternative to its current methodology for purposes of developing its Marginal Cost Study in the 2019 GRC cycle. Liberty was also required to meet with Cal Advocates three months before submitting its GRC Application and report on the status of its efforts to use a different methodology

²²³ Chapter 9: MCSS, Revenue Allocation and Rate Design Exhibit; Amended and ERRATA served on July 2, 2019

²²⁴ Cal Advocates-12, at 6-7.

²²⁵ Id.

²²⁶ D.16-12-024, Attachment A, at 8.

²²⁷ D.16-12-024, at 13.

to develop the Marginal Cost Study applied in its Application.²²⁸ We have no evidence that Liberty and Cal Advocates complied with these settlement conditions.

We find it problematic that Liberty is still relying on NV Energy's GRC filings for its Marginal Cost Study.²²⁹ Liberty's assertion that it does so because it is a newer distribution company depending on NV Energy for generation, transmission, and energy services, is misleading.²³⁰ First, generation services are market-based, and may not always need a cost of study as the market sets the price on energy and capacity. Second, by adopting NV Energy's Marginal Cost Study, Liberty is assuming that the coincident and non-coincident peak on its distribution system is the same as NV Energy. Lastly, adopting NV Energy's study also means that Liberty is expecting its customers to pay the same \$/ unit cost for consuming an additional unit of service as NV Energy's customers. Liberty states that demand-related costs make up most of the marginal costs at 73 percent, followed by energy-related costs at 15 percent, and customer-related costs at 12 percent.²³¹ Liberty is relying on NV Energy's generation-related demand costs, which could arguably be different from a California customer's peak summer and winter consumption pattern.

Because Liberty did not provide a timely alternative study to review and approve for this proceeding, we approve Liberty's proposed Marginal Cost Study in this GRC cycle. Liberty shall not rely on NV Energy's Marginal Cost Study results in its next GRC cycle. Liberty is ordered to undertake its own cost

²²⁸ *Id*.

²²⁹ Liberty-09, at 2, line 2-8.

²³⁰ *Id*.

²³¹ Liberty-09, at 3, line 10-11.

of service study to establish appropriate cost allocation and rate design in the next GRC cycle.

3.9.2. Revenue Allocation and Rate Revenue Cap

Liberty proposes to allocate its base rate revenues on an Equal Percentage of the Marginal Cost (EPMC) for each customer class with a rate increase capped at 21.7 percent from present rates through 2021.²³²

Cal Advocates uses the same revenue allocation percentage as Liberty in its analysis with a proposal to cap rate revenue increases at 6.1 percent, including all the adjustments to all special programs.²³³

We find it reasonable to allocate revenues based on the equal percentage of marginal cost. It is representative of the cost of service allocated to the rate classes, and each revenue dollar that is allocated to a customer class has the same percentage point attached to its marginal cost dollar value based on the marginal cost of service study.

Liberty proposes that no customer class will receive a rate decrease. Revenue increases for each rate class will be capped at a level slightly higher than the average total revenue requirement increase.²³⁴

We agree with Liberty that it is reasonable to cap rate class increases at a level close to the average revenue increase. This Decision authorizes the following base revenue allocation (Base Revenue Requirement is the sum of Generation Charge, Distribution Charge, Customer Charge and ECAC).

²³² Liberty-09, at 4.

²³³ Cal Advocates-12, at 8, line 4-11.

²³⁴ Liberty-09, at 4, line 15-21.

Rate Class	Current Class Base Revenue Requirement ²³⁵ (a)	Capped Class Base Revenue Requirement, after 2nd Allocation (b)	% increase over Present Revenue
Res. (D-1, DM-1, DS-1)	\$39,499,681	\$40,115,650	1.56%
A-1	\$15,800,392	\$15,800,392	0.00%
A-2	\$7,363,259	\$7,517,597	2.10%
A-3	\$17,072,988	\$17,449,104	2.20%
Street Lights	\$88,604	\$88,604	0.00%
OLS	\$177,832	\$177,832	0.00%
PA	\$162,844	\$162,844	0.00%
Total	\$80,165,599	\$81,312,023	1.43%

3.9.3. Rate Design

Liberty keeps the current rate design for each rate class. It does not propose to change the percentage of revenues collected from each rate within the customer class rate design. There was no opposition to the current rate design, and we find it reasonable to retain the current rate design. Similarly, for the various programs, such as ECAC, CARE, ESA, the cost recovery method will remain the same as under the present rate structure.

Customers and community members in Liberty's service territory had an opportunity to communicate their concerns specific to residential rate design to the assigned Judge and Commissioner during the public participation hearings (PPH) held in North and South Lake Tahoe. Customers in both areas were concerned with the rate increase proposed in this GRC application. Residential customers at the PPH stated rate increases burden permanent residents with added infrastructure costs arising due to usage demands of non-permanent residents/secondary homeowners. An ALJ ruling was issued seeking more information on rate design and revenue allocation amongst the residential

²³⁵ Base Rates exclude employee discount and voltage and transmission discount.

customer class. The ruling sought information for a potential change in rate design and revenue allocation. In response to the ruling, Liberty explained that permanent residents (including CARE customers) make up 39 percent of Liberty's residential customer class. Non-permanent residents make up 61 percent of Liberty's residential class. Liberty's current rate design uses the same tariff rate (D-1) for both permanent and non-permanent residential customers, but only permanent residents receive a monthly baseline allowance with a lower rate for a customer's baseline usage. Non-permanent residents do not receive the baseline allowance and thus pay a higher rate for 100 percent of their energy usage.

Based on Liberty's response, we find the current rate design consistent with rate design of other small utilities wherein non-permanent residents pay a higher charge for their energy consumption. Due to limited information available on the marginal cost study, we do not consider changes to the rate structure and revenue allocations. Therefore, we require Liberty to include, in its next marginal cost study, an analysis for permanent and non-permanent residents and the cost to serve these customers. In its next rate case, Liberty shall propose whether there is merit to improve the rate structure and design for residential rate class based on its findings of the marginal cost of service study.

3.9.4. Final Rate Increases

We note that from the time of filing this application, and until now, Liberty has implemented various rate increases. These rate increases were a result of the Commission's approval for program-specific memorandum accounts, PTAM implementation, and rate increases due to Turquoise Solar Facility Advice Letter

approval.²³⁶ Therefore, the rate increase we authorize in this decision is based on the current rate levels and not on the rates that were effective at the time of filing this application.

In summary, we approve the following rate design elements for each rate class:

- Residential Rate Class (Schedule D-1): we retain the current level of customer charge and the current split between generation and distribution rates. The residential rate classes will experience the following increases from the currently effective rates:
 - Non-CARE customers
 - 3.3 percent average bill increase for
 - 4.4 percent increase of \$ per kilowatt-hour for Tier 1 rates
 - 2.3 percent increase of \$ per kilowatt-hour for Tier 2 rates
 - o CARE customer:
 - 2.1 percent average bill increase for
 - 3 percent increase of \$ per kilowatt-hour for Tier 1 rates
 - 1.2 percent increase of \$ per kilowatt-hour for Tier 2 rates
- A-1 customer class: the total \$ per kilowatt-hour rate increase is 3.2 percent, with an average bill increase of 2.9 percent. We retain the current rate design of a customer charge (\$16.22) and a flat energy rate not differentiated by season or time of use.
- A-2 customer class rate increase is 13 percent for winter and a decrease of 1 percent for summer (average bill increases of 4 percent). We retain the current rate design of

²³⁶ Rate increases include \$3.38 million Base Rate increase from Turquoise AL 132-E-A, Catastrophic Events Memorandum Account ("CEMA") and PTAM

a customer charge (\$40.85) and a flat energy rate not differentiated by season or time of use.

- A-3 customer class rate increases are:
 - Winter: 13 percent for on-peak, 9 percent for mid-peak, and 3 percent for off-peak
 - Summer: 19 percent for on-peak, and 11 percent for off-peak resulting in an average bill increase of 3.5 percent. We retain the current rate design of a customer charge (\$483.29), a flat Vegetation Management fee (\$672.55), and a flat energy rate not differentiated by season or time of use.
- Streetlight and OLS customer schedules receive an average of 2.8 percent increase.
- PA Customer Class (agriculture customers using electricity for irrigation purposes). PA customer class rate will increase by 2.6 percent.
- Time of Use (TOU) customer classes will receive pricing increases equivalent to the overall increase in the customer class. We retain the same level of the price differential between the TOU periods as that in the Company's 2016 GRC. No changes are being made to the customer charge.
- We authorize Liberty's two new tariffs: Green Tariff and Light Emitting Diode (LED) Streetlight Tariff.

The revised rates are available in Appendix B of this decision.

3.10. GRC Memorandum Account

The General Rate Case (GRC) Revenue Requirement Memorandum Account previously approved in D.19-05-007 shall include the monthly differential between base rates in effect as of December 31, 2018, and base rates adopted in the instant proceeding for the period beginning January 1, 2019 through the effective date of this decision. The amount accrued in the GRC Memorandum Account shall be transferred to the Base Revenue Requirement

Balancing Account and amortized over an eighteen-month period consistent with the tariff provisions.

4. Motions

All previous rulings made during this proceeding are confirmed. All other outstanding motions for which rulings have not issued are deemed denied.

5. Categorization and Need for Hearing

This proceeding was preliminarily determined to be a ratesetting proceeding, and that determination was confirmed by the Assigned Commissioner's Scoping Memo and Ruling.

Evidentiary Hearing was held on December 9, 10, and 11, 2019.

6. Comments on Proposed Decision

The proposed decision of ALJ Lakha	inpal in this matter was mailed to the
parties in accordance with Section 311 of th	ne Public Utilities Code and comments
were allowed under Rule 14.3 of the Comn	nission's Rules of Practice and
Procedure. Comments were filed on	, and reply comments were filed
on by	

7. Assignment of Proceeding

Martha Guzman Aceves is the assigned Commissioner and Manisha Lakhanpal is the assigned ALJ in this proceeding.

Findings of Fact

- 1. For individual uncontested issues in this proceeding, we find that Liberty has made a prima facie just and reasonable showing unless otherwise stated in this decision.
- 2. Liberty is requesting a 2019 Revenue Requirement of \$91.44 million, a 2020 Revenue Requirement of \$96.93 million, and a 2021 Revenue Requirement of \$100.98 million.

- 3. Liberty currently uses a PTAM as outlined in its tariffs and as approved in D.12-11-030.
- 4. The PTAM allows Liberty to adjust rates in post-test years based on the Consumer Price Index less a 0.5 percent productivity factor for both labor and non-labor components and contains provisions to raise rates in attrition years for projects over \$4 million.
- 5. We find that PTAM is a stable rate-setting mechanism to allow incremental rate increases in the post-test years 2020 and 2021.
- 6. It is reasonable to help mitigate barriers in investment opportunities during post-test years associated with the risk of denial of cost recovery under PTAM.
- 7. Reviewing and granting approval of safety and reliability projects that do not meet the \$4 million Major Capital threshold for PTAM recovery will help mitigate the risk of denial of cost recovery under PTAM.
- 8. Liberty is requesting approval of \$117 million in capital expenditures from 2019 to 2021.
- 9. We find that the 7300 Line Reconductoring and Topaz Line Rebuild capital infrastructure projects are essential for safety and risk mitigation.
- 10. \$1.7 million for the 7300 Line Reconductoring and \$810,000 for Topaz Line project is reasonable for rate recovery in 2019 revenue requirement.
- 11. Liberty submitted a revised 2019 North Tahoe Transmission System Analysis with its request for construction and cost recovery of Phase II 625/650 Line Upgrade project.
- 12. Liberty's request to construct Phase II 625/650 is based on its 2018-2019 system peak load reaching 95.9 MW, thereby meeting the threshold trigger required in D.15-03-020 and Resolution E-4929.

- 13. There is an immediate need to decommission Brockway Substation and expand the Kings Beach substation as mitigation against wildfire in the future summer season.
- 14. Building the last half mile of 60 kV line from Truckee to King's Beach at 120 kV as part of the 625/650 Line Upgrade will complete the new ring bus on the circuit and strengthen Liberty's transmission network.
- 15. Liberty's projected \$13 million cost for Phase II 625/650 Line Upgrade is reasonable.
- 16. A formal Application process, not an advice letter, could better assist the Commission in making the proper determination for the construction of Phase III of 625/650 Line Upgrade.
- 17. Liberty is proposing a \$17.95 million microgrid project in the Olympic Valley, comprising 72 Tesla Powerpack batteries (each of which has 210 kWh of energy storage capacity) with a capacity of 8 megawatts and 32 megawatt-hours of battery energy storage system ("BESS"), and 4 Tesla bi-directional inverters.
 - 18. Liberty did not select Tesla through a competitive bid solicitation process.
- 19. We find that Liberty, Squaw Valley Resort, and Tesla planned the Olympic Valley Microgrid project in partnership, where Squaw Valley Resort offered to provide the land for the project on lease and earth-moving services if Liberty partnered with Tesla.
- 20. Liberty did not explore alternatives to the Olympic Valley Microgrid, other than a brief reference to an alternate approach of installing a new conduit along the 8300 circuit and new trenching and vaults near the Olympic village to tie into the existing conduit system going up the mountain at an estimated cost of \$3.4 million.

- 21. Liberty's cost-effectiveness analysis of the Olympic Valley Microgrid is not based on net-present-value (NPV) concept to allow converting all future costs and benefits to their present values.
- 22. We find that less than 20 percent of the residential load served by the Olympic Valley Microgrid project is primary resident customers.
- 23. It is reasonable to require Liberty to file a formal Application for the Olympic Valley microgrid project when better information and project design characteristics are known.
- 24. Liberty proposes to continue its voluntary conversion of electric and gas master-metered service at mobile home parks and manufactured housing communities (collectively, "MHPs") to direct service.
- 25. Liberty proposes to spend \$4.8 million from 2019 through 2021 on MHP meter conversions and recover these projected costs in the rate base via 2019, 2020 and 2021 revenue requirement.
- 26. Cal Advocates does not oppose for 2019 revenue requirement Liberty's MHP meter conversion project and cost recovery.
- 27. We find that MHP meter conversion program requires utilities to recover "actual," prudently incurred program costs via a balancing account, as approved in D.14-03-021 and as retained in D.20-04-004.
- 28. Review for reasonableness of "to the meter" MHP meter conversion costs will occur in the general rate case when costs are included in the ratebase.
- 29. Review for reasonableness of "beyond the meter" MHP meter conversion costs will happen in the first general rate case after service cutover.
- 30. It is reasonable to deny Liberty's request seeking cost recovery from ratepayers of "budgeted" MHP meter conversion.

- 31. Liberty's plan to redesign its North Lake Tahoe parking lot, which is a retrofit project to meet the compliance and safety requirements of the Tahoe Regional Planning Agency, is reasonable.
- 32. We find the scope of 2019 Distribution Replacements Capital Projects reasonable.
- 33. Cal Advocates' forecast test year costs of \$6.3 million, based on the five-year (2014-2018) average cost methodology, for the proposed Distribution Replacements Capital Projects is reasonable.
- 34. Liberty may seek cost recovery of actual costs of Distribution Capital Projects via PTAM for 2021, capped at \$6.3 million.
- 35. Liberty forecasts \$0.87 million in capital costs for new service installations for residential and commercial customers and claims.
- 36. We find Cal Advocates' recommendation of \$0.76 million for 2019 test year capital costs for new service installations and claims based on the more recent five-year average of actual expenditures covering 2014 through 2018 to be reasonable.
- 37. Liberty's 2019 cost forecast of \$4.3 million for Tahoe Vista and Apache Avenue Rule 20A projects is reasonable.
- 38. The total project costs for Rule 20 A in 2020 and 2021 are close to the PTAM's threshold for Major Capital Additions of \$4 million at \$3.42 million.
- 39. It is reasonable to authorize cost recovery of actual costs via PTAM for Rule 20A project capped at \$3.42 million.
- 40. Liberty's \$9 million cost forecast for AMI deployment and PTAM recovery is reasonable.
- 41. For fleet replacement, Liberty is requesting a 2019 budget of \$2.06 million, which is over twice its five-year average of historical expenditures.

- 42. Liberty's claim on fleet retirement conditions, fleet inventory and the need for replacing certain vehicles does not justify its cost of replacement
- 43. In a data response to Cal Advocates' request on detailed itemization, Liberty responded with a list of each vehicle it wants to purchase and cost.
- 44. We do not find evidence that Liberty has established a link between fleet retirement conditions, fleet inventory, the need for replacing certain vehicles, and the cost of replacement.
- 45. We find Cal Advocates' recommendation to use the past five year's average cost of \$974,000 reasonable for fleet replacement.
- 46. Per D.18-09-034, Liberty is authorized \$2,195,00 in capital costs for the Transportation Electrification program to implement DC fast chargers.
- 47. We do not find evidence supporting Liberty's request of \$75,621 for employee workstations, and it is reasonable to deny the costs.
- 48. Cal Advocates' forecasting methodology to use a four-year average (2015-2018) to forecast Information Technology capital expenses is reasonable.
- 49. Liberty is requesting \$6.6 million for the North and South Lake Tahoe Office Buildings remodel project.
- 50. There is no supporting evidence to escalate forecasted Capital Project costs using the 2.35 percent annual escalation factor in addition to earning a rate of return on ratebase.
- 51. Liberty proposes a WACC of 10.05 percent based on a ROE of 14.6 percent and a 2.38 percent cost of debt.
- 52. Liberty proposes a capital structure consistent with their capital structure adopted in the earlier GRC: Long-Term Debt of 47.5 percent and Common Equity of 52.5 percent.
 - 53. The proposed capital structure is reasonable.

- 54. We find a cost of debt of 2.38 percent reasonable.
- 55. Liberty's ROE request was revised in its rebuttal testimony from 10.3 percent to 14.6 percent by adding a wildfire risk premium of 430 basis points.
 - 56. Cal Advocates recommends an ROE of 8.62 percent.
 - 57. A-3 CC opposes the wildfire risk premium of 430 basis points.
- 58. We find that Liberty bases its request for a wildfire risk premium in large part on its decision not to participate in the Wildfire Fund established by AB 1054.
- 59. Liberty's wildfire risk premium of 430 basis points is based on testimony presented by the three large California investor-owned electric utilities in their consolidated 2020 cost-of-capital proceeding.
- 60. Liberty did not study or analyze its own risk data to support its request of a 430 basis points wildfire risk premium.
- 61. The passage of AB 1054 and other investor supportive policies in California has mitigated wildfire exposure faced by California's utilities.
- 62. AB 1054 provided considerable assurance of recovery of wildfire costs even to utilities that elected not to participate in the Wildfire Fund.
- 63. Liberty's infrastructure in terms of miles of transmission and distribution lines compared to the two large utilities it shares borders with, and is basing its request for a 430 basis points risk premium, namely PG&E and SCE, is less than one percent.
- 64. The purpose of the Wildfire Mitigation Plan is to mitigate potential ignitions and lessen the impacts should a fire occur.

- 65. Liberty's Wildfire Mitigation Plan lists a variety of measures that will reduce the risk of utility-related wildfires, including capital investment projects and more aggressive vegetation management.
- 66. We find that a range of 8.62 percent to 10.3 percent ROE is just and reasonable.
- 67. The 430 basis points of wildfire risk premium is outside the range of reasonable ROE.
- 68. Liberty's 2019 O&M and A&G expenses are based on a cost trend using a limited 18 months of actual history (2017 through mid-2018), which includes normal inflation.
 - 69. Liberty does not explain the basis of normal inflation.
- 70. We do not find any supporting data to increase the O&M cost estimates for FERC Accounts 902 (Meter Reading), 905 (Misc. Customer Accounts), 907 (Supervision) and 908 (Customer Assistance).
 - 71. Liberty's historical O&M and A&G cost display an inconsistent pattern.
- 72. We do not find Cal Advocates' proposal to use actual 2018 O&M and A&G data for 2019 revenue requirement reasonable, because it does not consider expected change in the maintenance cost or sales element during the test year.
- 73. We find \$19.6 million in 2019 O&M and A&G expenses reasonable, which is based on a multi-year (*e.g.*, three-to-five-years) average rather than a result of assigning a high weight to the latest observation or a trend analysis based on limited data.
- 74. Disallowing A&G expenses of \$506,505 from FERC Account 920 (executive compensation) and establishing a memorandum account to record expenses meets the requirements set by Commission Resolution E-4963.

- 75. Liberty escalates its 2019 O&M and A&G forecast using an annual escalation rate of 2.35 percent, which is the 23-year average annual change in the CPI West Region (not seasonally adjusted) from 1994-2017.
- 76. We find that four of the last five years of CPI-West inflation rates are well below the proposed 2.35 percent escalation rate proposed by Liberty.
- 77. We find A-3 CC's suggested escalation rate of 1.86 percent based on the five-year average reasonable.
- 78. The use of an average escalation factor based on the more recent five years is closer to the current market conditions.
- 79. Liberty is requesting to move from the 7.3-year to a three-year vegetation management cycle at the cost of \$3.984 million per year.
- 80. We find that Liberty has not spent its entire projected vegetation management budget in any given year.
- 81. It is reasonable to allow \$3,068,295 for the 2019 revenue requirement and \$915,705 in a memorandum account for Liberty's vegetation management program.
 - 82. Liberty is requesting \$791,000 for energy efficiency per year.
 - 83. Liberty spent \$439,153 in 2017 and \$439,884 in 2018 on EE programs.
- 84. During the past five years, Liberty spent close to \$471,000 per year on EE programs.
- 85. There is no reasonable basis, or showing of need, to expand Liberty's EE program by 68 percent.
- 86. Per the California Energy Commission's directive, savings from many lighting measures transitioned to code or standard practice, which means some of the EE measures for lighting are no longer or will become ineligible for rebates.

- 87. Liberty's forecasted costs do not reflect the impact of the reduced potential of savings from some of these lighting measures.
- 88. The Commission has adopted EE potential and goals for 2020-2030, which excludes the secondary refrigerator recycling program.
- 89. It is reasonable to expect that exclusion of some EE measures as an eligible program would lower the budgeted annual EE funds.
- 90. It is reasonable to approve an EE budget closer to the historical average spend over the past five years.
- 91. Liberty proposes \$1,207,000 for Test Year 2019 Solar Incentive Program (SIP), which is 225 percent higher than its 2018 SIP budget of \$371,000 and 212 percent higher than its actual 2018 recorded expense of \$419,515.
- 92. We do not find evidence on the projected uptake of the SIP program or how Liberty will expend \$1.2 million annually.
- 93. Cal Advocates' proposal to allow \$420,000 for SIP, which is 13 percent higher than Liberty's current budget is reasonable.
- 94. Liberty proposes to recover from ratepayers \$1.03 million in a TE memorandum account.
- 95. We find that as of mid-June 2019, Liberty had not yet started the TE program.
- 96. By allowing cost recovery of \$1.03 million in rates for the TE program expenses, we will burden the ratepayers with costs that have not materialized.
- 97. We find it reasonable to allow Liberty to recover half of its projected TE expense in 2019 rates via a memorandum account.
- 98. Allowing Liberty to set up a Balancing Account to track and record future expenses associated with the TE program authorized in D.18-09-034 is reasonable.

- 99. It is proper to credit contributions in aid of construction (CIAC) from rate base and consistent with Code of Federal Regulation, Part 201.
- 100. Liberty's method to offset plant additions in 2019-2021 to include CIAC credit offsets of \$0.352 million is reasonable.
- 101. Fuel inventory is not part of the rate base, and it is reasonable for Liberty to exclude fuel inventory of \$30,000 from the materials and supplies forecast in this application.
- 102. Reporting materials and supplies inventory as either construction or O&M provides the Commission with information about how the individual costs will be used for the purpose of ratemaking.
- 103. The inclusion of all materials and supplies as construction-related would inflate the rate base.
- 104. Liberty's claim is unfounded that Commission's Standard Practice U-16 does not segregate and remove capital inventory from materials and supplies balances.
- 105. Liberty fails to meet its burden to categorize Liberty's materials and supplies inventory as either construction-related or operations.
- 106. Liberty forecasts total working cash -ratebase of \$1.42 million for inclusion in the 2019 revenue requirement based on a lead-lag study methodology is consistent with Commission's Standard Practice U-16.
- 107. Cal Advocates does not oppose Liberty's working cash- ratebase lead-lag study.
- 108. Cal Advocates proposes to remove Injuries & Damages and Property Taxes from Prepayments, and accrued vacation and liabilities from Liberty's working cash- ratebase forecast, which results in a negative working cash amount of \$9.92 million.

- 109. Liberty provides no factual information explaining why it is reasonable to double count Injuries & Damages and Property Taxes, once as operational cash (Prepayments) and, then, as expenses in its lead-lag study.
- 110. It is reasonable and prudent to remove \$123,000 for Injuries and Damages and \$456,000 for Property Taxes from working cash- ratebase.
- 111. Using linear regression, Cal Advocates estimate Test Year 2019 accrued vacation and accrued liabilities, which results in deducting \$753,000 and \$10,017,000, respectively, for these components from Liberty's working cash- rate base.
- 112. Liberty's accrued vacation balance and accrued liabilities are a source of working cash during the period between its accrual in rates and its payments, and by not excluding these amounts from working cash, investors would be compensated for funds that they have not supplied.
- 113. We find the average of the past five years (2013-2018) of accrued vacations and accrued liabilities amount is a better indicator to make the appropriate deductions from the ratebase operational cash requirements.
- 114. We find it reasonable to reduce Liberty's 2019 ratebase working cash by \$7,829,000.
- 115. The current federal income tax rate is 21 percent.
- 116. Federal law allows a deduction for state income taxes paid, and in California, this is the California Corporate Franchise Tax (CCFT) deduction, which results in a lower effective federal tax rate of 19.14 percent.
- 117. Lowering the statutory federal income tax rate in this GRC cycle would amount to CCFT deductions in the current ratemaking process.

- 118. Federal tax law and Internal Revenue Service regulations mandate that a given year's CCFT expense is not available as a deduction for federal income tax until the following year.
- 119. In D.89-11-058, the Commission concluded that ratemaking should reflect the value of CCFT deductions, and it should be the prior years' Commissionadopted CCFT, not the current year CCFT.
- 120. It is reasonable to use the statutory federal income tax rate of 21 percent and use the prior year's CCFT ratemaking amount for the flow-through treatment for the CCFT deductions in setting rates.
- 121. We do not find evidence supporting Liberty's use of a 3 percent or its revised 2.35 percent escalation rate to estimate its test-year account balances for uncollectibles, cash working capital, fuel inventory, materials and supplies, and prepayments.
- 122. Ratepayers funded the higher taxes in the past, therefore, the Excess Accumulated Deferred Income Taxes (EADIT) due to the federal tax cut is eligible for return to ratepayers when the Tax Cuts and Jobs Act of 2017 reduced the Federal Corporate Income Tax Rate from 35 percent to 21 percent.
- 123. A-3 CC adjusted Liberty's EADIT by including the income tax gross-up and removing Liberty's adjustment to EADIT related to a net operating loss (NOL).
- 124. We find that the excess deferred tax asset related to the NOL carryforward is netted against the excess plant-associated deferred tax liability.
- 125. Liberty uses the deferred tax liability to compute the amount of taxes deferred because of the use of accelerated tax depreciation that will not be payable to the government due to the change in tax law.

- 126. Liberty's tax memorandum account, approved in D.16-12-024, will provide the Commission with information to review in order to evaluate the reasonableness of various tax options.
- 127. It is reasonable to require Liberty to inform the Commission of a potential increase or decrease of \$155,000 or more due to changes issued by the IRS that would impact Liberty's treatment of the EADIT and NOL.
- 128. It is reasonable for Liberty to revise its sales forecast based on the most currently available data through 2018.
- 129. Liberty's revised sales forecast is 2 percent lower in 2019, 3 percent lower in 2020, and 4 percent lower in 2021.
- 130. Liberty's request for ECAC Billing Factor of \$29.64 per megawatt-hour is reasonable.
- 131. Liberty's forecasted power purchase and fuel costs and 2018 reconciled cost estimates are reasonable.
- 132. It is reasonable to add \$30,000 in fuel costs from ratebase and modify Liberty's ECAC Billing Factor to \$30.42 per megawatt-hour.
- 133. Liberty's proposed GHG costs and revenue allowances used in calculating the climate credits are reasonable.
- 134. D.20-05-044 has addressed Liberty's unauthorized climate credit payments in 2019, the data errors affecting 2019 climate credits, and fund allocations for the SOMAH program from 2016-2019.
- 135. Since Liberty has already issued 2019 climate credit and D.20-05-044 has corrected the spillover effect of the unauthorized issuance of 2019 climate credits, it is reasonable to avoid fixing the same error twice.
- 136. It is reasonable for Liberty to carry forward adjustments from 2019 ECAC and climate credit payments as a supplement to the 2021 ECAC Proceeding.

- 137. Liberty's marginal cost of service study uses methodologies consistent with and found in Liberty's earlier GRC filings.
- 138. Liberty applies NV Energy's marginal cost of service to develop its marginal cost of study results.
- 139. Liberty is not a "newer" distribution company, as it has served customers through GRC cycles and should have gathered data to update its Marginal Cost Study to reflect its system's need.
- 140. We do not have evidence that as part of its settlement in the previous GRC Liberty met with Cal Advocates three months before submitting its Application to report on the status of its efforts to use a different methodology to develop the Marginal Cost Study applied in its Application.
- 141. We find it problematic that Liberty is still relying on NV Energy's GRC filings for its Marginal Cost Study because in adopting NV Energy's Marginal Cost Study, Liberty is assuming that the coincident and non-coincident peak on its distribution system is the same as NV Energy and it expects its customers to pay the same \$/unit cost for consuming an additional unit of service as NV Energy's customers.
- 142. Liberty's demand-related costs make most of the marginal costs at 73 percent, followed by energy-related at 15 percent, and customer-related at 12 percent.
- 143. Liberty is relying on NV Energy's generation-related demand costs, and not on its customer's peak summer and winter consumption pattern.
- 144. The Commission has no alternative marginal cost of service study to review and approve for this proceeding.
- 145. Liberty and Cal Advocates allocate base rate revenues on an equal percentage of the marginal cost for each customer class.

- 146. It is reasonable to allocate revenues based on the equal percent of marginal cost, as it is representative of the cost of service allocated to the rate classes.
- 147. Liberty proposes to cap rate class increase at a level close to the average revenue increase.
- 148. Liberty's proposal to increase rate class revenues capped at a level slightly higher than the average total revenue requirement increase is reasonable.
- 149. Retaining the current rate design for each rate class including the rate structure for the various programs, such as ECAC, CARE, ESA is reasonable.
- 150. Permanent residential customers in Liberty's service territory voiced concerns at the PPHs that rate increases burden them with added infrastructure costs arising due to usage demands of non-permanent residents/secondary homeowners.
- 151. We find that permanent residents (including CARE customers) make up 39 percent and non-permanent residents make up 61 percent of Liberty's residential class.
- 152. Liberty's current rate design uses the same tariff rate (D-1) for both permanent and non-permanent residential customers.
- 153. Permanent residential customers receive a monthly baseline allowance with a lower rate for a customer's baseline usage and non-permanent residents pay a higher energy rate for 100 percent of their energy usage.
- 154. We find the current rate design consistent with rate design of other small utilities wherein non-permanent residential customers pay a higher charge for their energy consumption.
- 155. It is reasonable to require Liberty to include, in its next marginal cost study, an analysis for permanent and non-permanent customers and the cost to serve these customers.

- 156. We find Liberty's proposals for rate spread and rate design are reasonable.
- 157. The proposed rate design maintains the same customer charge for all rate classes.
- 158. We find that from the time of filing this application, and until now, Liberty has implemented various rate increases arising from the Commission's approval for program-specific memorandum accounts, PTAM implementation, and rate increases due to Turquoise Solar Facility Advice Letter approval.
- 159. The current customer charge for residential customers is \$9.02.

Conclusions of Law

- 1. Liberty bears the burden to establish that its requests are just and reasonable.
- 2. Pub. Util. Code § 451 provides, in part, "all charges demanded or received by any public utility ... shall be just and reasonable."
- 3. Liberty must establish its requests are just and reasonable by the preponderance of the evidence.
- 4. Pub. Util. Code § 454.8 requires, in part, "the commission shall consider a method for the recovery of these costs which would be constant in real economic terms over the life of the facilities so that ratepayers in a given year will not pay for the benefits received in other years."
 - 5. The PTAM Factor for use in 2021 should be authorized.
- 6. The PTAM Factor may be filed on October 15, as a Tier 2 Advice Letter, with rates effective January 1 of the following year.
- 7. Liberty should be authorized to continue to use for 2020 and 2021 the PTAM for Major Capital Additions based on California allocated costs relying on actual cost data and in-service dates.

- 8. The PTAM for Major Capital Additions may continue to be filed on October 15 as a Tier 2 Advice Letter, with rates effective January 1. It may be filed as soon as reasonably feasible for 2020, with rates effective within 30 days thereafter.
- 9. Liberty should be granted authorization to build capital projects, as shown in Summary Section 3.2.5 under Table 1 and allowed recovery of \$18,564,948 in capital project cost, in its 2019 revenue requirement.
- 10. Liberty should be granted authorization to build and recover capital project costs in 2020 and 2021 as shown in Summary Section 3.2.6 under Table 2.
- 11. Liberty should be authorized the use of PTAM for Major Capital Additions for 2020 and 2021 based on actual cost data and in-service dates capped at \$54,439,000.
- 12. Liberty's should file a formal Application for its proposal to build and recover costs for Phase III 625/650 Line Upgrade project.
- 13. The cost of building and rate recovery from ratepayers of the \$18 million Olympic Valley Ski Resort Microgrid project should be denied.
- 14. We should deny Liberty's forecasted MHP meter conversion program cost for cost recovery in this GRC Cycle as D.14-03-021237 and D.20-04-004 direct utilities to file actual costs.
 - 15. We should not allow escalation of forecasted rate base costs.
- 16. Ratepayers should not pay for program expenses that a utility does not spend.
 - 17. We should adopt a cost of capital of 7.63 percent.

²³⁷ D.14-03-021, OP 8, at 78.

- 18. Liberty's proposed capital structure of 47.5 percent Long-Term Debt and 52.5 percent Common Equity should be adopted.
- 19. Liberty's proposed Cost of Debt of 2.38 percent for the 2019 Test Year should be adopted.
 - 20. We should deny a 430 basis points wildfire risk premium.
- 21. The prudent manager standard in AB 1054, which is incorporated in the statute, materially improves the likelihood that a utility's actions will be found prudent, which mitigates the risk to shareholders that wildfire costs will not be recovered from ratepayers.
 - 22. We should authorize a return on equity of 10 percent.
 - 23. The 2019 O&M and A&G expenses of \$19.6 million should be authorized.
- 24. In future GRC filings, when Liberty's FERC Account cost estimates increase by 5 percent or more it should file a detailed explanation supporting the basis of its increase.
- 25. We should deny A&G expenses of \$506,505 from FERC Account 920 (executive compensation) and establish a memorandum account for Liberty to record expenses, which meets the requirements set by Commission Resolution E-4963.
- 26. We should allow \$3,068,295 for 2019 revenue requirement and \$915,705 in a memorandum account for Liberty's vegetation management program.
 - 27. We should allow \$471,000 in EE programs.
 - 28. We should approve \$420,000 for SIP.
- 29. We allow Liberty to recover for TE program \$517,000 in 2019 operating expenses, as authorized under D.18-09-034.

- 30. Consistent with Code of Federal Regulation, Part 201, we should allow the CIAC credit offsets from rate base of \$0.352 million.
- 31. We should allow Liberty to exclude fuel inventory of \$30,000 from the materials and supplies and include it in the ECAC calculations.
 - 32. We should approve a reduction in ratebase working cash by \$7,829,000.
- 33. The use of an effective federal income tax rate of 19.14 percent should be denied and instead the statutory federal income tax rate of 21 percent should be authorized.
- 34. We should not authorize the escalation of uncollectibles, cash working capital, fuel inventory, materials and supplies, and prepayments.
 - 35. Liberty's treatment of EADIT should be approved.
- 36. Liberty should, within 30 days of the adoption of this Decision inform the Commission of potential increase or decrease of \$155,000 or more in revenues due to IRS regulations issued between the time of filing this application and issuance of this decision that would impact Liberty's treatment of the EADIT and NOL.
 - 37. We should authorize Liberty's revised sales forecast.
- 38. An ECAC Billing Factor to \$30.42 per megawatt-hour should be authorized.
- 39. We should authorize the marginal cost of service study proposed in this GRC cycle.
- 40. Liberty should stop using NV Energy's marginal cost of service study and undertake its own marginal cost of service study before filing its next GRC application.
 - 41. We should retain the current rate design.
 - 42. No changes to customer charges should be authorized.

ORDER

IT IS ORDERED that:

- 1. Application 18-12-001 is granted to the extent set forth in this Decision. Liberty Utilities (CalPeco) is authorized to collect, through rates and through authorized ratemaking accounting mechanisms, the base revenue requirement set forth in Appendix A, effective as of the date of this decision.
- 2. Liberty Utilities (CalPeco) shall file a Tier 1 Advice Letter within 30 days of issuance of this decision to implement the revenue requirement and ratemaking adopted herein. The revenue requirement and revised tariff sheets will be effective as of the date of this decision.
- 3. Liberty Utilities' (CalPeco) tax memorandum account approved in Decision 16-12-024 shall remain open.
- 4. Liberty Utilities (CalPeco) shall notify the Energy Division of the California Public Utilities Commission within 30 days of issuance of this decision of any tax related changes, tax related accounting changes or any tax related procedural changes that may have been implemented by the Internal Revenue Service regulations during the review period of this Application and that materially affect or may materially affect revenues. "Materially affect" is defined as a potential increase or decrease of \$150,000 or more of California revenue.
- 5. Liberty Utilities (CalPeco) shall notify the Energy Division of the California Public Utilities Commission of any tax related changes, tax related accounting changes or any tax related procedural changes that Internal Revenue Service may implement in the future that materially affect or may materially affect revenues. "Materially affect" is defined as a potential increase or decrease of \$150,000 or more of California revenue.

- 6. Liberty Utilities (CalPeco) shall exclude \$506,505 of executive compensation from its Administrative and General expenses, FERC Account 920, and establish a memorandum account to record expenses.
- 7. Liberty Utilities (CalPeco) shall provide, in its next General Rate Case testimony, a chapter under Operations and Maintenance and Administrative and General with an explanation on why the costs have increased for each FERC Account per the Uniform System of Accounts that has a cost increase of 5 percent or more.
- 8. Liberty Utilities (CalPeco) is authorized to continue to use the Post-Test Year Adjustment Mechanism (PTAM) Factor for use in 2021 and calculated as the greater of: (i) the September Global Insight U.S. Economic Outlook forecast of Consumer Price Index for the following calendar year with an offsetting productivity factor of 0.5 percent; or (ii) zero. The PTAM factor may continue to be filed on October 15 (or as soon thereafter as is reasonable) as a Tier 2 Advice Letter, with rates effective January 1 of the following year.
- 9. Liberty Utilities (CalPeco) is authorized to continue to use the Post-Test Year Adjustment Mechanism for Major Capital Additions based on California allocated costs relying on actual cost data and in-service dates in 2020 and 2021.
- 10. Liberty Utilities (CalPeco) may file its Post-Test Year Adjustment Mechanism for Major Capital Additions factor as a Tier 2 Advice Letter, as soon as reasonably feasible for 2020, with rates effective within 30 days of filing, and otherwise, on October 15, with rates effective January 1 of the following year.
- 11. Liberty Utilities (CalPeco) is authorized to recover an Energy Cost Adjustment Clause Billing Factor of \$30.42 per megawatt-hour.
- 12. Liberty Utilities (CalPeco) shall provide, in its next General Rate Case testimony, an updated Marginal Cost of Service Study based on its own system

distribution network level to request a revenue requirement and not use NV Energy's Marginal Cost of Service Study results.

- 13. Liberty Utilities (CalPeco) shall file its next General Rate Case for test year 2022 pursuant to the applicable Rate Case Plan adopted in Decision 89-01-040, as modified.
 - 14. Application 18-12-001 is closed.This order is effective today.Dated ________, at San Francisco, California.

APPENDIX A

LIBERTY UTILITIES (CALPECO ELECTRIC) LLC SUMMARY OF RESULTS OF OPERATIONS - CALIFORNIA JURISDICTION FOR THE FORECASTED TWELVE MONTHS ENDING DECEMBER 31, 2019 (IN THOUSANDS)

	(a)		(b)		(c)	(d)		(e)		(f)		(g)		(h)
Line No.	Development of Return		Forecast Results of Operations		Less ECAC, M, CEMA, E and SIP	Forecast Results Ex ECAC (b) + (d)		Additional Revenue Required		General Rate Revenue Requirement (d) + (e)		Add ECAC, VM, CEMA EE and SIP	F	Total Revenue Requirement (f) + (g)
1	Operating Revenues													
2	Sales Revenue	s	77.888	2	(22,270) \$	55.618	\$	4,528	s	60.146	\$	17.811	s	77.956
3	Other Operating Revenue	•	691	•	(22,270) 4	691	•	4,520	•	691	•	17,011	•	691
4	Revenue Credits		1,362		_	1,362		-		1,362				1,362
5	Energy Efficiency (EE)		471		(471)	-		-		-		471		471
6	Solar Initiative Program (SIP)		371		(371)	-		-		-		420		420
7	Vegetation Management (VM)		2,523		(2,523)	-		-		-		3,060		3,060
8	Other Memo Accts (2018 CEMA,TE,&VM)		700		(700)	-		4 = 0.0				1,433		1,433
9 10	Total Operating Revenues		84,006		(26,335)	57,671		4,528		62,198		23,195		85,393 1.65%
11	Operating Expenses				122 2-21									
12	Fuel & Purchased Power		22,270		(22,270)	-		-		-		17,811		17,811
13 14	ECAC Total Fuel & Purchased Power Expense		22.270		(22.270)	-		- 0		-		17.811		17.811
18	VM, CEMA, EE, SIP		4.065		(22,270) (4,065)	-		U				5,384		5,384
15	Other O&M Expense		19.348		(4,003)	19.348		2		19.349		5,364		19.349
16	Total Operation & Maintenance		45,683		(26.335)	19.348		2		19,349		23,195		42.544
17	Depreciation & Amortization Expense		11,236		-	11,236		-		11,236		-		11,236
19	Taxes Other Than Income		4,897		-	4,897		52		4,949		-		4,949
20	Deferred Income Taxes		2,304		-	2,304		-		2,304		-		2,304
21	EADIT Amortization		(160.00)		-	(160)		-		(160)		-		(160)
22	Federal Income Tax		2,203 997		-	2,203 997		859 397		3,062 1,394		-		3,062
23 24	California Corporate Franchise Tax Total Operating Expenses		67.160		(26.335)	40.825		1,309		1,394 42.134		23.195		1,394 65,329
25	Total Operating Expenses		67,100		(20,333)	40,023		1,309		42,134		23,185		65,325
26	Operating Income	\$	16,846	\$	- \$	16,846	\$	3,219	\$	20,064	\$	-	\$	20,064
27														
28	Rate Base													
29	Gross Plant in Service	\$	419,252	\$	- \$		\$	-	\$	419,252	\$	-	\$	419,252
30 31	Accum Prov for Depr & Amort Net Plant in Service		(93,143) 326,108		-	(93,143) 326,108		-		(93,143) 326,108				(93,143) 326,108
32	Net Plant in Service		326,108		-	326,108		-		326,108		-		326,108
33	Additions													
34	Construction Work In Progress		_		_	_		_		_		_		_
35	Materials & Supplies		4,421		-	4,421		-		4,421		-		4,421
36	Prepayments		355		-	355		-		355		-		355
37	Other Additions		-		-	-		-		-		-		-
38	Working Capital		204		-	204		-		204				204
39 40	Total Additions		4,980		-	4,980		-		4,980		-		4,980
41	Deductions													
42	Customer Advances for Construction		(14,269)		_	(14,269)				(14,269)				(14,269)
43	Accumulated Deferred Income Tax		(18,105)		_	(18,105)		_		(18,105)		_		(18,105)
44	Other Deductions - COR & EADIT		(35,611)		_	(35,611)		-		(35,611)		-		(35,611)
45	Total Deductions		(67,985)		-	(67,985)		-		(67,985)		-		(67,985)
46									_					
47 48	Rate Base	\$	263,104	\$	- \$	263,104	\$	-	\$	263,104	\$	-	\$	263,104
49	Rate of Return (%)		6.40%			6.40%				7.63%				7.63%
					_							=		

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2019 RO (Calif)

LIBERTY UTILITIES (CALPECO ELECTRIC) LLC SUMMARY OF RESULTS OF OPERATIONS - CALIFORNIA JURISDICTION FOR THE FORECASTED TWELVE MONTHS ENDING DECEMBER 31, 2020 (IN THOUSANDS)

	(a)		(b)		(c)		(d)		(e)		(f)		(g)		(h)
Line No.	Development of Return		Forecast Results of Operations		Less ECAC, VM, CEMA, EE and SIP		Forecast Results Ex ECAC (b) + (d)		Additional Revenue Required		General Rate Revenue Requirement (d) + (e)		Add ECAC, VM, CEMA EE and SIP		Total Revenue equirement (f) + (g)
1	Operating Revenues														
2	Sales Revenue	s	77,956	S	(17,811)	S	60,146	s	3,070	s	63,216	s	17,811	s	81,027
3	Other Operating Revenue		691		-		691		-		691				691
4	Revenue Credits		1,362		-		1,362		-		1,362		-		1,362
5	Energy Efficiency (EE)		471		(471)		-		-		-		471		471
6	Solar Initiative Program (SIP)		420		(420)		-		-		-		420		420
8	Vegetation Management (VM) Other Memo Accts		3,060 1,433		(3,060)						-		3,060 1,433		3,060 1.433
9	Total Operating Revenues	_	85.393		(23,195)		62.198		3.070		65.269		23,195		88.463
10	Total Operating Nevertoes		60,393		(23,190)		62,196		3,070		60,269		23,195		00,403
11	Operating Expenses														
12	Fuel & Purchased Power		17,811		(17,811))							17,811		17,811
13	ECAC		-												-
14	Total Fuel & Purchased Power Expense		17,811		(17,811)				0				17,811		17,811
18	VM, CEMA, EE, SIP		5,384		(5,384))							5,384		5,384
15	Other O&M Expense	_	19,741		-		19,741				19,742				19,742
16 17	Total Operation & Maintenance Depreciation & Amortization Expense		42,935 11,673		(23,195))	19,741 11,673		1		19,742 11.673		23,195		42,936 11,673
19	Taxes Other Than Income		5,116		-		5,116		35		5,151				5,151
20	Deferred Income Taxes		3,283				3,283		-		3,283				3,283
21	EADIT Amortization		(160)				(160)				(160)				(160)
22	Federal Income Tax		2,938		_		2,938		583		3,521				3,521
23	California Corporate Franchise Tax		1,292				1,292		269		1,561				1,561
24	Total Operating Expenses		67,077		(23,195))	43,882		888		44,770		23,195		67,965
25														_	
26	Operating Income	\$	18,316	Ş	-	ş	18,316	Ş	2,182	ş	20,498	Ş		ş	20,498
27															
28 29	Rate Base Gross Plant in Service	s	439,668			s	439,668			s	439,668			s	439,668
30	Accum Prov for Depr & Amort	-	(99,906)			9	(99,906)	-		9	(99,906)	-		9	(99,906)
31	Net Plant in Service		339,762				339,762				339,762				339.762
32	THE PARTY OF THE P		555,162				555,102				555,162				555,162
33	Additions														
34	Construction Work in Progress						-								
35	Materials & Supplies		4,570		-		4,570				4,570				4,570
36	Prepayments		367				367				367				367
37 38	Other Additions		208		-		208		-		208		-		208
38	Working Capital Total Additions	_	5,145				5.145				5.145				5.145
40	Total Additions		0,140				0,140		-		0,140				0,140
41	Deductions														
42	Customer Advances for Construction		(14,535)				(14,535)				(14,535)				(14.535)
43	Accumulated Deferred Income Tax		(24,107)				(24,107)				(24,107)				(24,107)
44	Other Deductions - COR & EADIT		(37,496)				(37,496)				(37,496)				(37,496)
45	Total Deductions		(76,137)		-		(76,137)		-		(76,137)				(76,137)
46	Poto Poss	_		_		_		_		_		_		_	
47	Rate Base	\$	268,769	ş	-	5	268,769	ş	-	5	268,769	ş		ş	268,769
48 49	Rate of Return (%)	_	6.82%			_	6.82%			_	7.63%				7.63%

LIBERTY UTILITIES (CALPECO ELECTRIC) LLC SUMMARY OF RESULTS OF OPERATIONS - CALIFORNIA JURISDICTION FOR THE FORECASTED TWELVE MONTHS ENDING DECEMBER 31, 2021 (IN THOUSANDS)

	(a)		(b)		(c)		(d)		(e)		(T)		(g)		(h)
Line No.	Development of Return		Forecast Results of Operations	VM,	CAC, CEMA, and SIP		Forecast Results Ex ECAC (b) + (d)		Additional Revenue Required		General Rate Revenue Requirement (d) + (e)		Add ECAC, VM, CEMA EE and SIP		Total Revenue equirement (f) + (g)
1	Operating Revenues	_				_		_	4.545	_		_	47.044	_	
2	Sales Revenue Other Operating Revenue	\$	81,027 ±	•	(17,811)	5	63,216 691	5	1,619	5	64,835 691	5	17,811	\$	82,646 691
4	Revenue Credits		1,362		-		1,362		-		1,362				1.362
5	Energy Efficiency (EE)		471		(471		1,502				1,002		471		471
6	Solar Initiative Program (SIP)		420		(420								420		420
7	Vegetation Management (VM)		3.060		(3,060				_				3.060		3.060
8	Other Memo Accts		1,433		(1,433		_		_		_		916		916
9 10	Total Operating Revenues		88,463		(23,195		65,269		1,619		66,888		22,678		89,566
11	Operating Expenses														
12	Fuel & Purchased Power		17,811		(17,811))			-		-		17,811		17,811
13	ECAC				-		-		-		-		-		-
14	Total Fuel & Purchased Power Expense		17,811		(17,811				0		-		17,811		17,811
18	VM, CEMA, EE, SIP		5,384		(5,384)	-		-		-		4,867		4,867
15	Other O&M Expense	_	20,141				20,141				20,142				20,142
16 17	Total Operation & Maintenance Depreciation & Amortization Expense		43,336 12,292		(23,195	•	20,141 12,292		1		20,142 12,292		22,678		42,819 12,292
19	Taxes Other Than Income		5.349		-		5.349		18		5.367		-		5.367
20	Deferred Income Taxes		2,549		-		2,549		18		2.540				2.540
21	EADIT Amortization		(160)		-		(160)		-		(160)				(160)
22	Federal Income Tax		3,219				3,219		307		3,526				3,526
23	California Corporate Franchise Tax		1,527				1,527		142		1.669				1.669
24	Total Operating Expenses		68,102		(23,195)	44,907		468		45,376		22,678		68.053
25															
26	Operating Income	\$	20,362	5	-	\$	20,362	ş	1,151	\$	21,512	ş		\$	21,512
27															
28	Rate Base														
29	Gross Plant in Service	\$	467,291		-	\$	467,291	ş	-	\$	467,291	ş	-	\$	467,291
30	Accum Prov for Depr & Amort	_	(104,346)		-		(104,346)		-		(104,346)				(104,346)
31 32	Net Plant in Service		362,946		-		362,946		-		362,946				362,946
33	Additions														
34	Construction Work in Progress														
35	Materials & Supplies		4.587				4,587		_		4.587				4.587
36	Prepayments		369		_		369		_		369				369
37	Other Additions				_		_				-				_
38	Working Capital		212		-		212		-		212				212
39	Total Additions		5,167		-		5,167		-		5,167		-		5,167
40															
41	Deductions														
42 43	Customer Advances for Construction		(14,805)		-		(14,805)		-		(14,805)		-		(14,805)
	Accumulated Deferred Income Tax		(31,782)		-		(31,782)		-		(31,782)		•		(31,782)
44 45	Other Deductions - COR & EADIT Total Deductions	_	(39,501)		-		(39,501)		-		(39,501)				(39,501)
45 46	Total Deductions		(86,088)		-		(86,088)		-		(86,088)		-		(86,088)
47	Rate Base	\$	282,024	1	-	\$	282,024	\$	-	\$	282,024	\$	-	\$	282,024
48 49	Rate of Return (%)		7.22%				7.22%				7.63%				7.63%
													-		

(END OF APPENDIX A)

APPENDIX B

RESIDENTIAL RATE

						Resider	ntial RATE B	REAKDO	WN (D-1	L)						
			Fixed Charge	Distribution	Generati on	ECAC - Balancing	ECAC - Amortization	CARE	ESA-LIEE	EE	SIP	TE	VGMGMT	CEC/CPUC	СЕМА	TOTAL kWh
	Permanent	Tier 1	9.02	0.07555	0.008394	0.0289045	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.007578	0.00088	0.00583	0.125672
New	1 cilitatient	Tier 2			0.015501	0.0438728										0.147747
Authorized	Non-Primary	Tier 2	9.02	0.07555	0.015501	0.0438728	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.007578	0.00088	0.00583	0.147747
Authorized	CARE	Tier 1	7.216	0.05026	0.008394	0.0289045	-0.00673	0	0.0013	0.000805	0.000717	0.000883	0.007578	0.00088	0.00357	0.096562
	CARE	Tier 2		0.04585	0.015501	0.0438728										0.114227
	Permanent	Tier 1	9.02	0.07088	0.00817	0.033	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00435	0.00088	0.00583	0.12039
	remanent	Tier 2			0.01508	0.05009										0.14439
Current	Non-Primary	Tier 2	9.02	0.07088	0.01508	0.05009	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00435	0.00088	0.00583	0.14439
	CARE	Tier 1	7.22	0.04647	0.00817	0.033	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00435	0.00088	0.00357	0.09372
	CARE	Tier 2		0.04167	0.01508	0.05009										0.11292
	Tier 2			2019 kWh Forecast	T1 Use	New Authorized Bill	Current Bill	\$ Increase	% Increase							
Average	Permanent	•	14316	659	452.47	96.34	93.26	3.08	3.3%							
Customer	Non-Primary		25075	506	0.00	83.73	82.04	1.70	2.1%							
Bill Impacts	CARE		3763	608	406.82	69.47	68.06	1.41	2.1%							

A1 CUSTOMER RATE

					A1 RATE	BREAKDO	OWN							
	Fixed Charge	Distribution	Generation	ECAC - Balancing	ECAC - Amortization	CARE	ESA-LIEE	EE	SIP	TE	VGMGM T	CEC/CPUC	CEMA	TOTAL kWh
New Authorized	16.22	0.08595	0.01719	0.036477233	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.008615	0.00088	0.00668	0.154327
Current	16.22	0.08125	0.01517	0.04384	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00451	0.00088	0.00668	0.14961
Average Customer Bill	Number of Customers	2019 kWh Forecast	New Authorized Bill	Current Bill	\$ Increase	% Increase								
	5348	1580	260.13	252.68	7.46	3.0%								

A2 CUSTOMER RATE

							A2	RATE BR	EAKDOW	/N							
		Fixed Charge	Dist - Demand	Gen - Demand	Distribution	Generation	ECAC - Balancing	ECAC - Amortiza tion	CARE	ESA-LIEE	EE	SIP	TE	VGMGM T	CEC/CPUC	СЕМА	TOTAL kWh
New	Winter	40.85	12.1		0.0457	0	0.02381998	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.006044	0.00088	0.00577	0.080749
Authorized	Summer	40.85		7.87	0	0.038779	0.0524548	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.006044	0.00088	0.00577	0.102463
Current	Winter	40.85	12.1		0.03194	0	0.03092	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00448	0.00088	0.00577	0.07127
Current	Summer	40.85		7.87	0	0.0271	0.06809	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00448	0.00088	0.00577	0.1036
Average Customer Bill		Number of Customers	Summer kWh	Winter kWh	Summer kW	Winter kW	New Authorized Bill	Current Bill	\$ Increase	% Increase							
Impacts		250	6869	16045	49	106	3708.52	3564.24	144.28	4.0%							

A3 CUSTOMER RATE

							-	A3 RATE B	REAKDOW	'N								
		Customer	Veg Mgmt	Dist - kW	Gen - kW	Max - kW	Dist -	ECAC - B	ECAC - A	CARE	ESA-LIEE	EE	SIP	TE	CEC/CPUC	СЕМА	TOTAL	% Share
	Winter - On	Charge 483.29	672.55	6.69	1.738764		kWh 0.02861	0.0390965	-0.00673	0.00156	0.0013	0.000805	0.000717	0 000883	0.00088	0.00574	0.072862	kWh 0.16031
	Winter - Mid	483.29	672.55	1.982615			0.024438	0.0398438	-0.00673	0.00156	0.0013	0.000805			0.00088	0.00574	0.069437	0.30913
New Authorizec	Winter - Off	483.29	672.55				0.012889	0.0327178	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.00088	0.00574	0.050762	0.259393
Authorizec	Summer - On	483.29	672.55	2.798986	11.11113		0.037886	0.0390041	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.00088	0.00574	0.082045	0.154972
	Summer - Off	483.29	672.55				0.02047	0.0305762	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.00088	0.00574	0.056202	0.116194
	Max					5.43												
	Winter - On	483.29	672.55	6.69	1.738764		0.01362	0.04699	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00088	0.00574	0.06451	0.129463
	Winter - Mid	483.29	672.55	1.982615	1.187448		0.01167	0.04789	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00088	0.00574	0.06346	0.09418
Current	Winter - Off	483.29	672.55				0.00625	0.03932	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00088	0.00574	0.04947	0.026125
Current	Summer - On	483.29	672.55	2.798986	11.11113		0.01797	0.04688	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00088	0.00574	0.06875	0.193384
	Summer - Off	483.29	672.55			5.43	0.0098	0.03675	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00088	0.00574	0.05045	0.114007
	Max																	
Average		Number of Customers	Summer kWh	Winter kWh	Summer kW	Winter kW	Max kW	New Authorized Bill	Current Bill	\$ Increase	% Increase							
Customer Bill		55	49557.35	133198.86	217.53	1316.462	1004.317	26776.5	25878.9	897.6	3.5%							
Impacts	Winter				5.54138													
	Summer				13.91011													
	Max				5.43													

PA CUSTOMER RATE

						PA RA	TE BREA	KDOWN						
	Fixed Charge	Distribution	Generation	ECAC - Balancing	ECAC - Amortization	CARE	ESA-LIEE	EE	SIP	TE	VGMGMT	CEC/CPUC	CEMA	TOTAL kWh
New Authorized	16.22	0.02531	0.02424828	0.036477	-0.00673	0.00156	0.0013	0.000805	0.000717	0.000883	0.0109929	0.00088	0.00193	0.098374
Current	16.22	0.02352	0.02253	0.04384	-0.00705	0.00156	0.0013	0.00086	0.00061	0	0.00588	0.00088	0.00193	0.09586
	Number of Customers	2019 kWh Forecast	New Authorized Bill	Current Bill	\$ Increase	% Increase								
Average Customer Bill	19	3577	368.15	359.15	8.99	2.5%								

SL CUSTOMER RATE

					S	L RATE BRE	AKDOW	'N						
	SL	Dist	Gen	ECAC - Balancing	ECAC - Amortization	CARE	ESA-LIEE	EE	SIP	TE	VGMGMT	CEC/CPUC	СЕМА	TOTAL
	5800 Lumen @ 29 kWh	14.55	0.06623672	1.07068	-0.1864	0.05	0.04	0.02	0.02	0.03	0.4	0.03	0.52	16.61052
New	9500 Lumen @ 41 kWh	14.594158	0.11039454	1.3572	-0.27028	0.06	0.05	0.037422	0.032495	0.04	0.57	0.03	0.73	17.34139
Authorized	22000 Lumen @ 85 kWh	15.775379	0.20974962	2.595	-0.52192	0.12	0.1	0.065488	0.056867	0.07	1.09	0.07	1.41	21.04056
	5800 Lumen @ 29 kWh	13.98	0.06	1.419266		0.05	0.04	0.02	0.02	0	0.18	0.03	0.52	16.11927
	9500 Lumen @ 41 kWh	14.02	0.11	1.798275	-0.29	0.06	0.05	0.04	0.03	0	0.26	0.03	0.73	16.83828
Current	22000 Lumen @ 85 kWh	15.16	0.2	3.459461	-0.56	0.12	0.1	0.07	0.05	0	0.5	0.07	1.41	20.57946
		Number of Customers	New Authorized Bill	Current Bill	\$ Increase	% Increase								
Average	5800 Lumen @ 29 kWh	57.78	16.61	16.12	0.49	3.0%								
Customer	9500 Lumen @ 41 kWh	77.39	17.34	16.84	0.50	3.0%								
Bill	22000 Lumen @ 85 kWh	312.34	21.04	20.58	0.46	2.2%								

OLS CUSTOMER RATE

A.18-12-001 ALJ/ML2/gp2

PROPOSED DECISION

					OLS	RATE BR	EAKDOW	/N						
	OLS	Dist	Gen	ECAC - Balancing	ECAC - Amortization	CARE	ESA-LIEE	EE	SIP	TE	VGMGMT	CEC/CPUC	СЕМА	TOTAL
	5800 Lumen @ 29 kWh	9.63	0.089477352	0.95758	-0.1864	0.05	0.04	0.02	0.02	0.03	0.2	0.03	0.56	11.44066
New	9500 Lumen @ 41 kWh	9.8872474	0.156585366	1.3572	-0.27028	0.06	0.05	0.03	0.03	0.04	0.28	0.03	0.79	12.44075
Authorized	16000 Lumen @ 67 kWh	10.30108	0.234878049	2.205	-0.43804	0.1	0.09	0.05	0.05	0.06	0.46	0.06	1.29	14.46292
	22000 Lumen @ 85 kWh	10.949791	0.268432056	2.7975	-0.5592	0.13	0.11	0.07	0.06	0.08	0.58	0.08	1.63	16.19652
	5800 Lumen @ 29 kWh	9.13	0.08	1.274114	-0.2	0.05	0.04	0.02	0.02	0	0.09	0.03	0.56	11.09411
Current	9500 Lumen @ 41 kWh	9.38	0.15	1.798275	-0.29	0.06	0.05	0.04	0.03	0	0.12	0.03	0.79	12.15828
Current	16000 Lumen @ 67 kWh	9.77	0.22	2.935301	-0.47	0.1	0.09	0.06	0.04	0	0.2	0.06	1.29	14.2953
	22000 Lumen @ 85 kWh	10.39	0.25	3.725574	-0.6	0.13	0.11	0.07	0.05	0	0.26	0.08	1.63	16.09557
		Number of Customers	New Authorized Bill	Current Bill	\$ Increase	% Increase								
Average	5800 Lumen @ 29 kWh	565.10	11.44	11.09	0.35	3.1%								
Average	9500 Lumen @ 41 kWh	552.11	12.44	12.16	0.28	2.3%								
Customer Bill	16000 Lumen @ 67 kWh	198.94	14.46	14.30	0.17	1.2%								
ы	22000 Lumen @ 85 kWh	7.78	16.20	16.10	0.10	0.6%								

Residential Time of Use Rates

		Distribution		on Generation						1				1					1	
	Customer Charge					ECAC Offset	ECAC Balancing	CARE	ESA	EE	CPUC Surcharge	CEC Surcharge	Veg Managem ent per kWh	GHG Carbon Cost	Climate Credit	Solar Initiative	CEMA	TE	BRRBA	Total per kWh
			ı						ı	TOU	-A1 < 20kW	i								
Winter - ON	21.44		0.086		0.017	0.048	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.189094
Winter - MID			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.177088
Winter - OFF			0.086		0.017	0.006	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.146427
Summer - ON			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.177088
Summer - OFF			0.086		0.017	0.006	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.146518
	TOU-A1 > 20 kW																			
Winter - ON	21.44		0.086		0.017	0.048	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.193154
Winter - MID			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.181148
Winter - OFF			0.086		0.017	0.006	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.150487
Summer - ON			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.181148
Summer - OFF			0.086		0.017	0.006	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.150578
	Electric Vehicle < 20 kW																			
Winter - ON	21.44		0.086		0.017	0.048	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.189
Winter - MID			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.177
Winter - OFF			0.086		0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.130
Summer - ON			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.177
Summer - OFF			0.086		0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.000	0.009	0.006	-0.004	0.001	0.007	0.001	0.021	0.130
				1							Vehicle > 20				ı					
Winter - ON	21.44		0.086		0.017	0.048	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.193
Winter - MID			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.181
Winter - OFF			0.086		0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.134
Summer - ON			0.086		0.017	0.036	-0.007	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.181
Summer - OFF			0.086		0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.000	0.009	0.006		0.001	0.007	0.001	0.021	0.134
											OU A-2					•				
Winter - ON	129.85	12.1	0.0457			0.025	-0.007	0.002	0.001	0.001	0.001	0.000	0.006	0.006		0.001		0.001	0.021	0.108771
Winter - MID		12.1	0.0457			0.025	-0.007	0.002	0.001	0.001	0.001	0.000	0.006	0.006		0.001	0.006	0.001	0.021	0.109249
Winter - OFF		12.1	0.0457			0.021	-0.007	0.002	0.001	0.001	0.001	0.000	0.006	0.006		0.001	0.006	0.001	0.021	0.104688
Summer - ON				7.87	0.039	0.059	-0.007	0.002	0.001	0.001	0.001	0.000	0.006	0.006		0.001	0.006	0.001	0.021	0.135639
Summer - OFF			ļ	7.87	0.039	0.046	-0.007	0.002	0.001	0.001	0.001	0.000	0.006	0.006		0.001	0.006	0.001	0.021	0.12292

(END OF APPENDIX B)